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Current Affairs
Workbook

July 2025

Progress Tracking Table

Mains Questions

Ethics Case Studies

MCQs

Quick facts

Self-Evaluation

Progress Tracking Table

Activity Type	Total Questions	Correct Answers	Attempted	Score/Percentage
MCQ's				
True/False Statements				

Monthly Learning Summary

Top 3 Learnings/Insights

1.
2.
3.

Progress Comparison

Previous Month's Score
Current Month's Score
Areas of Improvement

Reflection Section

Strengths
Areas for Improvement
Goals for Next Month

Comprehensive Summary

True/ False

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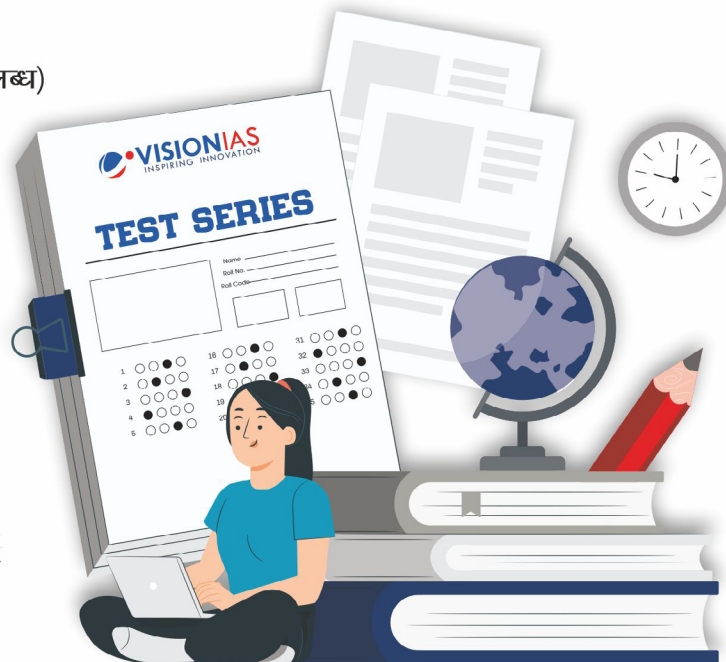 - Monthly Current Affairs

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Performance and Progress Analysis

CONTENTS

From the Editor's Desk

Dear Readers,

The July edition of the Workbook continues our commitment to provide you with a structured and analytical framework for mastering current affairs with depth and precision. Engaging with the Workbook after reviewing the Monthly Current Affairs Summary will not only sharpen your recall but also enhance your analytical ability—skills indispensable for success in competitive examinations.

This month's Workbook covers an expansive range of developments across polity, economy, and international relations. In the **Polity and Governance** section, we explore critical debates such as the challenges of Digital Colonialism, reforms for Online Content Regulation, and the new National Cooperative Policy 2025. Each of these topics highlights the interplay between governance, technology, and citizen welfare.

In **International Relations,** key developments like the signing of the India–UK Comprehensive Economic and Trade Agreement (CETA), evolving India–Maldives relations, and China's hydropower project on the Brahmaputra are analyzed, reflecting India's growing role in shaping regional and global geopolitics.

Equally enriching are the segments on **Economy, Security, Environment, and Science & Technology**—ranging from Quantum Cyber Readiness to Urban Resilience in the face of climate change—ensuring that your preparation remains comprehensive and future-oriented.

How the Workbook is Organized?

1. **Summary of the Monthly Magazine:** Crisp overview of key developments.

2. **Quick Facts Block:** Key facts and figures at your fingertips.

3. **Activities Block:**

    MCQ's : Test comprehension of significant topics.

    True/False Statements : Verify your understanding of key facts.

    Mains practice Questions : Explore and articulate in-depth topics with clarity.

    Ethics Case Studies: Apply current affair to ethical dilemmas for better decision making.

    Answers and Explanation : Includes answers to MCQs and True/False questions for immediate feedback.

4. **Progress tracking table :** Monitor your progress with a dedicated section to record scores and reflect on areas for improvement.

We hope you continue to engage with the Workbook actively and make it a key component of your preparation strategy. With persistence and smart effort, the journey to success becomes achievable.

Warm regards,
Team Current Affairs,
VisionIAS

"The future depends on what you do today."
– Mahatma Gandhi

POLITY AND GOVERNANCE

1.1. Digital Colonialism

Why in the News?

Former Indian Vice President warned of **digital colonialism**, calling **dependence on foreign digital infrastructure the prime threat to sovereignty, not invasion.**

About Digital Colonialism

- ⮑ It refers to dominance of **global big tech firms that extract and monopolize user data**, often **without consent,** undermining state and individual autonomy.

Key Enabler of Digital Colonialism

- ⮑ **Heightened Economic Gains**: Drives economic gains through user analysis.
- ⮑ **Competitive Edge:** Improves prediction of behaviors.
- ⮑ **Advances Artificial Intelligence**: Fuels AI with big data for higher productivity.
- ⮑ **Exchange Value of Data**: Lets users/organizations earn by data sharing.

Key Pillars of Dominance Characterizing Digital Colonialism

- ⮑ **Economic Domination:** Dependence on **monopolistic tech** (Google, Microsoft, Facebook).
- ⮑ **Imperial Control**: Proprietary systems and **restrictive licensing (e.g., App Store policies exercise unilateral decisions over apps).**
- ⮑ **Surveillance Capitalism:** Mass data harvesting shaping political/economic outcomes **(e.g., Cambridge Analytica).**
- ⮑ **Tech Hegemony:** Cloud monopolies (**Amazon, Microsoft, Google**) dictate data flows.
- ⮑ **Cultural Imperialism:** Algorithms reinforcing **dominant values.**
- ⮑ **Benevolent Masking**: Big tech presenting profit-driven projects as **philanthropy (e.g., Free Basics).**

Key Issues with Digital Colonialism

- ⮑ **Rising North-South Disparity**: Data-driven digitalization deepens divides as most tech giants belong to the North.
- ⮑ **National Security**: Weak local infrastructure makes critical sectors vulnerable to external control.
- ⮑ **Privacy & Digital Rights**: Dependence on foreign platforms risks privacy breaches and surveillance.
- ⮑ **Existential Threat to Local Business**: Global dominance in ads, retail, and services undercuts local enterprises.
- ⮑ **Economic Losses**: Tech giants shift profits to tax havens, reducing revenues for countries like India.
- ⮑ **Difficulty in Regulation**: Laws struggle to govern cyberspace due to its borderless nature.
- ⮑ **Network Effect**: Once dominant, platforms lock users in, blocking local competition.

Measures to Tackle Digital Colonialism

India:

- ⮑ **DPDP Act, 2023**: Framework for personal data protection, including processing abroad for Indian services.
- ⮑ **Competition Act, 2002**: Prevents unfair trade, protects consumers.
- ⮑ **Global advocacy**: Push for data localization, sovereignty at G20, BRICS, WTO; led G20 DPI task force.
- ⮑ **Other efforts**: ONDC for e-commerce alternatives; India Stack as national DPI.

Other Nations:

- ⮑ **European Union:** GDPR, Data Act, Governance Act, AI Act for digital autonomy.
- ⮑ **China**: Digital Silk Road under BRI to expand telecom, AI, cloud, surveillance.
- ⮑ **Russia:** Sovereign Internet Law (2019) for centralised internet control.

Way Forward

- ⮑ **Digital Sovereignty**: States to control all digital assets and supply chains.
- ⮑ **Data Localisation**: Ensure storage, transfer, processing within borders.
- ⮑ **Governance Framework**: Rules for data generation, protection, sharing, infrastructure.
- ⮑ **Cross-Border Flows**: Balance growth, public interest, and integration.
- ⮑ **Data Lifecycle Reform**: Manage data from creation to reuse/destruction.
- ⮑ **Inclusive Digital Future**: Bridge divides, ensure inclusivity, uphold ethics.

Conclusion

Digital colonialism fragments the internet into **geopolitical blocs ("splinternet")**. Global cooperation and **balanced governance are essential** for digital solidarity and safeguarding **sovereignty.**

1.2. Online Content Regulation

Why in the News?

Ministry of Information and Broadcasting (I&B) has banned several OTT platforms, for streaming **obscene content.**

More on the News

- ⮑ They were banned under the **IT Act, 2000 and IT Rules, 2021.**
- ⮑ In **Ranjit D. Udeshi v. State of Maharashtra (1965),** SC upheld obscenity as a **valid restriction on free speech (Art. 19).**

Need for content regulation

- ⮑ **Societal Reach:** 950+ million internet users, unregulated content influences society**.**
- ⮑ **Violence:** 2010 study shows **~90% pornography showed aggression.**
- ⮑ **Protecting Vulnerable:**
  - ➜ **Children:** Early exposure distorts healthy views.
  - ➜ **Women**: Promotes objectification and inequality.
  - ➜ **Minorities:** Hate speech fuels division.
- ⮑ **Ethical Imperative:** Degrading material harms norms, families, society. **Example: Bulli Bai app, 2021.**
  - ➜ **Philosophical Basis:**
    - ◆ **Mill's Harm Principle**: Freedom limited if harmful.
    - ◆ **Kant's Imperative**: People not objects.
    - ◆ **Unequal Impact:** Low-income, low-literacy groups most exposed.

Regulatory Framework for Regulation of Obscene Content

- ⮑ **IT Act 2000:**
  - ➜ **Sec 67/67A**: Publishing obscene content online.
  - ➜ **Sec 69A**: Govt power to block content.
  - ➜ **Sec 79**: Safe harbour for intermediaries, lost if unlawful content not removed.
- ⮑ **IT Rules 2021**: Place OTT and digital news under MIB.
- ⮑ **BNS 2023 (Sec 294):** Defines obscenity; criminalises obscene material online.
- ⮑ **POCSO Act:** Bans distribution/sale of child pornography.
- ⮑ **Indecent Representation of Women Act, 1986**: Prohibits indecent depictions of women.

Challenges in Regulating Content

- ⟳ **Regulatory Challenges**
  - ➜ **Regulatory Overlap**: Split roles of **MeitY (IT Rules) and MIB (content) cause coordination issues.**
  - ➜ **Subjectivity:** Different interpretations of obscenity leading to **arbitrary govt action.**
- ⟳ **Technological Challenges**
  - ➜ **Encryption:** Enables illegal content sharing **without detection.**
  - ➜ **Algorithms:** Feedback loops **push more explicit content.**
  - ➜ **VPNs:** Allow bypassing of **restrictions and access** to banned content.
- ⟳ **Creative Freedom:** Strict bans curb creativity, **Infringe Article 19(1)(a).** Example: Ban on movie Fire **(homosexuality).**

Way Ahead

- ⟳ **Multi-Stakeholder Consultations:** Balance speech and sensitivities with all stakeholders.
- ⟳ **Use of Technology**: Filters, User-report scanners, AI-based moderation.
- ⟳ **Strengthen Self-Regulation**: Industry-led bodies to set standards, reduce govt control.
- ⟳ **Learn from Best Practices**: EU Audiovisual Media Directive and GDPR ensures balance.

1.3. National Cooperative policy 2025

Why in the News?

Union Minister of Cooperatives launched **the National Cooperative Policy 2025.**

Key features of the policy

- ⟳ **Second Policy**: First was in 2002.
- ⟳ **Vision:** Cooperatives as key to **Viksit Bharat 2047** under **Sahkar-se-Samriddhi**.
- ⟳ **Objective**s: Activate participation of **50 crore people currently outside or inactive.**
- ⟳ **Mission Pillars**: Six strategic pillars identified.
- ⟳ **Other key features of policy include**
  - ➜ **Legislative Reforms**: States to amend **laws for transparency, autonomy, ease of business**.
  - ➜ **Financial Empowerment:** Reduce cooperative taxes; **extend corporate incentives**.
  - ➜ **Business Ecosystem**: Model cooperative village in each State/UT; **branding under Bharat brand.**
  - ➜ **Future-Readiness**: National Cooperative Stack integrated **with Agri-stack, databases.**
  - ➜ **New Sectors**: Expand into **clean energy, waste, technology**.
  - ➜ **Inclusivity**: Promote women, Youth, SC/ST participation.
  - ➜ **Targets**: **Triple GDP share by 2034**; 30% more societies.
- ⟳ **Implementation**: By Implementation Cell (Ministry of Cooperation).
- ⟳ **Monitoring**: By National Steering Committee, chaired by Union Minister.

Strategic Pillars for Cooperative Growth
(pyramid from top to bottom)
- Youth Engagement
- Sector Diversification
- Inclusivity & Reach
- Future Preparedness
- Vibrancy & Innovation
- Foundational Institutions
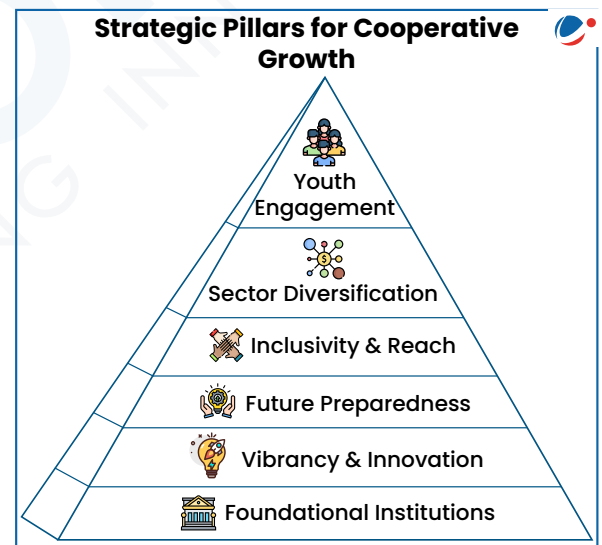
Cooperatives in India

- ⟳ **Origin**: Began with **Cooperative Credit Societies Act, 1904.**
- ⟳ **Definition**: Autonomous voluntary association, jointly owned, democratically controlled, meeting economic, social, cultural needs.
- ⟳ **Status**: More than 8 lakh societies, **2 lakh credit (e.g., PACS), 6 lakh non-credit (e.g., housing, consumer), more than 30 crore members linked with cooperatives**.
  - ➜ **Top Sectors**: Housing, Dairy, PACS.
- ⟳ **Constitutional Status:** (97th Amendment, 2011)
  - ➜ **Fundamental Right**: **Article 19(1)(c)** includes cooperatives.
  - ➜ **Directive Principle**: **Article 43B** (promote cooperatives), **New Part IXB**: Articles 243ZH–243ZT for governance.

- **Governance Structure**
  - ➡ **Multi-State Cooperatives:** Union List; governed by **MSCS Act, 2002.**
  - ➡ **State Cooperatives**: State List; governed by respective Acts.

Significance of Cooperatives

- **Rural Upliftment**: 1/3rd rural population linked.
- **Boosting Farmers' Income**: Pooling, bargaining power (e.g., Amul).
- **Societal Impact:**
  - ➡ **Women Empowerment:** SEWA Bank for microfinance, jobs, equality.
  - ➡ **Sustainability**: ULCCS, Kerala for green practices.
- **Community Ties**: Build social capital.
- **Values**:
  - ➡ **Equality**: One person–one vote.
  - ➡ **Leadership**: Democratic election develops leaders (e.g., Maharashtra).

Challenges for Cooperatives

- **Limited Capacity**: Rural cooperatives lack infrastructure, training, expertise.
- **Political Intervention**: Party interference reduces transparency, efficiency.
- **Regulatory Complexity:** Bureaucracy slows cooperative growth.
- **Digital Gap**: Only 45% members familiar with digital tools.
- **Regional Imbalance**: Top 5 states hold 57% of cooperatives.
- **Other Issues:** Skilled workforce shortage, weak cooperation, limited members/resources.

Conclusion

Strengthen cooperatives through **private partnerships, better infrastructure, and tech access**. Promote inclusivity, merge weak units, and ensure **transparency via CGI and RTI.**

1.4. PRI Finances

Why in the News?

The Standing Committee on Rural Development & Panchayati Raj reported on **fund devolution** under the Panchayati Raj system (PRI).

More on the News

- It focused on financial issues faced by PRIs, **highlighting weak transfer of 3Fs (Functions, Funds, Functionaries).**

Source of Revenue for PRI

- **Tax and grants** from Central/State governments.
- **Own taxes, duties, tolls**, fees under Article 243-H.
- Funds for executing **Centrally Sponsored Schemes (CSSs).**

Issues of the Finance of PRI

- **Declining Allocations**: Successive budgets reduced PRI funds, **weakening decentralisation**.
- **Tied vs Untied Grants**: 15th FC **have 60% tied, 40% untied funds** leading to underutilisation.
- **Election Delays**: Legal/administrative hurdles **(e.g., OBC quota in Telangana)** stall fund use.
- **Weak Functioning of District Planning Committee:** Poor coordination leading to **fragmented planning, underuse of funds.**
- **Irregular State Finance Commissions (SFC)**: Only 9 states have 6th SFC**; delays devolution.**
- **Poor GPDP Uploads:** Low compliance on **eGram Swaraj delays 15th FC grants.**
- **Low Own Revenue**: Panchayats' **own source of revenue (OSR) is only 1.1% thus weak autonomy.**

Importance of Finance for PRI

- **Rural Development**: Implement schemes, align with local needs.
- **Agriculture**: Boost cooperatives (e.g., Amul), promote sustainability.
- **SDGs**: Localisation aids 2030 targets.

- **Health:** Maintain health centres, train workers; better health leading to lower infant mortality.
- **Education**: Build, maintain schools; reduce dropouts, improve quality.
- **Women Empowerment:** 1/3rd seats reserved; studies show better health, education, welfare outcomes.

Initiatives to improve finances of PRIs			
Audit Online	**OSR Augmentation**	**Ranking System**	**eGramSwaraj**
For digital audits of panchayat accounts	SVAMITVA for property tax; mineral funds sharing	Basis for performance grants	Upload GPDPs for accountability and transparency

Recommendations given in the report

- **Reallocation Flexibility**: Allow tied funds for other uses; **provide timely untied funds** through formula based on needs (e.g., backwardness, area).
- **Continuity in Election Delays:** Ensure timely elections; if delayed, **appoint nominated representatives** with clear roles.
- **Regular Constitution of SFCs**: States must constitute SFCs on time, **submit reports in uniform**, simple formats.
- **Ensure Timely GPDP Uploads**: **Train Panchayat members for preparing**, submitting GPDPs aligned with Block/District plans.
- **Adequate Devolution**: States to create time-bound **devolution roadmap; transfer control** over local staff (e.g., health workers).
  - **Ministry of Panchayati Raj (MoPR)** to prepare **State of Devolution Report** on 3Fs progress.
- **Strengthen OSR Generation**: Provide financial/technical aid, devolve more powers, and reward high-performing Panchayats.

1.5. Inter State Water Dispute (ISWD)

Why in the News?

The Ravi-Beas Waters Tribunal (1986) got a **1-year extension to settle sharing between Punjab, Haryana, and Rajasthan.**

More in the News

- Centre to form a **technical committee on Polavaram Banakacherla Link Project** and **Telangana–Andhra water issues.**
- Odisha & Chhattisgarh has agreed to **resolve the Mahanadi dispute amicably**.
- Inter-State disputes trace back to colonial era, e.g., **Cauvery conflict between Madras Presidency and Mysore.**

Reasons for ISWD

- **Asymmetric Access:**
  - **Geography:** Upper riparian states enjoy advantage**.**
  - **State Reorganization:** Boundaries drawn without river-basin focus.
- **Increasing Demand**: Growth in population, farming, urbanisation, economy.
- **Development Projects**: Dams and projects trigger disputes (e.g., Narmada, Cauvery).
- **Fragmented Governance:**
  - **Union:** Weak structures for dispute resolution.
  - **States:** Conflicting strategies, narrow approach.
  - **Unscientific:** No basin-based management.
  - **Data Gaps**: Non-uniform collection of river flow/volume data.
- **Legal & Constitutional Framework:**
  - **262(1):** Parliament can provide laws for dispute adjudication.
  - **262(2):** Courts barred from jurisdiction if Parliament so provides.
  - **Laws under Article 262**:
    - **River Boards Act, 1956**: Union may set up boards to regulate inter-state rivers with States.
    - **Inter-State River Water Disputes Act, 1956**: Union may establish tribunal on state request.
  - **Seventh Schedule:**
    - **Union List (Entry 56):** Regulation of inter-state rivers.
    - **State List (Entry 17):** Water use, irrigation, etc., subject to Entry 56.

Challenges in resolving ISWD

- ➲ **Delays:**
  - → **Tribunal Formation**: e.g., Cauvery Tribunal set up in 1990 after decades.
  - → **Award Delivery:** Narmada – 9 yrs, Krishna – 4 yrs, Godavari – 10 yrs.
  - → **Notification/Enforcement:** Delays in Gazette publication (Krishna – 3 yrs, Godavari – 1 yr) create uncertainty.
  - → **ISRWD Act, 1956:** Tribunal award published is equal to SC decree.
- ➲ **Politicization**: Disputes handled politically, ignoring social-environmental aspects.
- ➲ **Lack of Participation**: Local communities, states, and stakeholders often excluded.
- ➲ **Supreme Court Intervention:** Though it cannot adjudicate, SC interprets tribunal awards, causing delay (e.g., Cauvery 2007, final SC verdict later came with modifications).

Other measures taken to resolve ISWD

- ➲ **ISRWD (Amendment) Bill, 2019**
  - → Create **Disputes Resolution Committee.**
  - → **Establish single tribunal** with multiple benches.
  - → **Time-bound awards** and central river basin databank.
- ➲ **Draft River Basin Management Bill, 2018**
  - → **Objectives:** Equity, cooperation, basin-based management.
  - → River Basin **Master Plan & Authority**.
- ➲ **National River Linking Project: Surplus-to-deficit** water transfers to reduce disputes.

Way forward

- ➲ **Cooperative Federalism:** Union as mediator; NITI Aayog to host Dialogue Forum on ISWDs.
- ➲ **Policy Intervention:** Bring ISWDs under Inter-State Council (Art. 263); amend ISRWD Act, 1956 for efficient tribunals.
- ➲ **Legislation:** Expedite ISRWD Amendment Bill & RBM Bill consultation.
- ➲ **Data System**: National river databank; AI for flow and use tracking.
- ➲ **Stakeholder Engagement**: Ensure community role in water planning/management.

1.6. Cost of Politics in India

Why in the News?

Observer Research Foundation (ORF) supported by the Westminster Foundation for Democracy (WFD) **conducted a case study on India's "Cost of Politics "analyzing spending by electoral candidates.**

Major Findings of the Study

- ➲ **Campaign Costs**: Lok Sabha candidates spend ₹5–10 crore, higher in rich/competitive states (TN, Telangana, AP, Maharashtra).
- ➲ **Rising Routine Expenditure:** Events, constituent support, party activities.
- ➲ **Social Media Spending**: Funds for experts, influencers, ads; cheaper than rallies/logistics.
- ➲ **Vote Buying**: Cash handouts surged, pressuring even unwilling candidates.
- ➲ **Cost Drivers of Politics**: Outreach, logistics, media, patronage, network upkeep.
- ➲ **Funding Sources**:
  - → **Primary:** Personal wealth, family/friends.
  - → **Other:** Loans, assets, crowdfunding, business groups.
  - → Parties **expect self-funding thus favours** wealthy/dynastic, excludes marginalized.

Implications of High Costs of Elections

- ➲ **Implications for Governance**
  - → **Business–Politics Nexus:** Corporate financiers influence policies (e.g., tax cuts), **worsening inequality**.
  - → **Fundraising Priority:** Leaders focus on raising/recovering funds over governance.
  - → **Corruption Risk**: Black money dominance fuels electoral corruption.
    - ⬥ India ranked 96 **in TI's 2024 Corruption Index.**
- ➲ **Impact on Democratic Integrity**
  - → **Erosion of Trust**: Poor transparency lowers voter faith, **reduces participation**.

➡ **Power Capture**: Big parties dominate funds, **enabling vote buying, media reach; small/regional parties lose competitiveness.**

➡ **Barrier for Underprivileged**: High costs prevent women, youth, **and non-elite from contesting.**

Way Forward

➥ **Spending Limits:** Strengthen ECI oversight, judicial support; enforce caps (e.g., UK model).

➥ **Constitutional Status**: Bring political parties under formal regulation.

➥ **State Funding by Vote Share**: Reduce corporate influence, aid smaller parties (supported by multiple commissions).

➥ **Voter Sensitisation**: Awareness drives by ECI, media, civil society to limit money power.

➥ **Real-time Donation Disclosure**: Increase transparency (e.g., U.S. model).

Conclusion

Indian election finance marked by **high costs, concentrated resources, and black money, threatens democracy and equality.** Urgent reforms and stricter corporate donation laws are essential.

1.7. Lowering of Age for voting

Why in the News?

Globally, several countries, including Germany, Austria, Malta, Estonia, Argentina, Nicaragua, have lowered their voting age from 18 to 16 years.

More in the News

➥ **United Kingdom**: Announced plan to reduce voting age **from 18 to 16.**

➥ **India**: A **Constitution Amendment Bill 2020** proposed reducing voting age from **18 to 17 under Article 326.**

➡ It was a **private member bill.**

Constitutional provisions related to voting age in India (Art. 326)

➥ **Grants universal suffrage** to citizens aged 18 and above.

➥ Voting age lowered from **21 to 18 by 61st Amendment 1988.**

➥ Right to vote is **statutory,** changeable by **ordinary law.**

Arguments in favour of Lowering of Age for voting	Arguments in against of Lowering of Age for voting
➥ **Cognitive Maturity:** Many hold 16-year-olds can make independent political choices. ➥ **Intergenerational Equity**: Exclusion of under-18 favours older **voters and limits future-oriented policies.** ➥ **Broader Manifestos**: Would add focus on education, child rights, gender justice. ➥ **Youth Engagement**: Early voting builds political participation and strengthens democracy.	➥ **Lack of Maturity**: Adolescents **may lack knowledge, making them vulnerable** to manipulation. ➥ **Low Turnout:** In 2024, less than **40% of 18–19-year-olds voted.** ➥ **Age Threshold Clash**: May trigger **calls to reduce other legal age limits.** ➥ **Logistical Burden**: Registering **16–17-year-olds adds costs** and administrative challenges.

Conclusion

Advocacy on **lowering voting age must use evidence** and involve adolescents. Civic education in schools and **continuous voter registration can boost engagement** and widen youth participation**.**

1.8. News in Shorts

1.8.1. Disruption of Parliament

In the 17th Lok Sabha, sittings were **88% in Lok Sabha and 73% in Rajya Sabha.**

➲ In the 1950s, Parliament met **120–140 days yearly**; now only **60–70 days.**

Reasons for the Disruptions

- Opposition parties use it to **gain greater publicity and visibility in public.**
- **Anti-defection law** forces MPs to follow party whips.
- **Disruptions arise** from **controversial national** or **regional issues** dominating **public attention.**
- **Increase in political parties** means less debate time and more disruptions over unlisted issues.

Issues with Parliamentary Disruptions

➲ **Weak Accountability**: Disruptions hinder debates and government questioning.

➲ **High Cost**: Running Parliament costs ₹2.5 lakh per minute.

➲ **Eroding Trust**: Frequent stalling reduces public faith in Parliament.

Measures that can be adopted to address parliament disruption

➲ **Dedicated Opposition Time**: Like UK, earmark specific debate days.

➲ **Stronger Ethics Committees**: Monitor and report disruptions.

➲ **Annual Calendar**: Fix yearly sittings with limited flexibility.

1.8.2. Removal of Judges in Higher Judiciary

145 Lok Sabha MPs signed a motion against Justice Yashwant Varma under **Articles 124, 217, 218.**

➲ Rajya Sabha Chairman also received a motion **signed by 50+ members.**

Constitutional provisions regarding removal of judges

➲ **Article 124(4):** Removal of SC judges on proven misbehavior or incapacity.

➲ **Article 124(5):** Parliament regulates procedure by Judges Enquiry Act, 1968.

➲ **Article 217(1)(b):** HC judge removed by President in same manner as SC judge under Art. 124(4).

➲ **Article 218:** Extends 124(4) & 124(5) provisions to High Courts.

Steps in removal process

Initiation	➲ Motion with 100 LS or 50 RS members submitted to Speaker/ Chairman.
Committee formation and Investigation	➲ If admitted, a **3-member committee (SC judge, HC chief justice, jurist)** investigates. ➲ If judge found guilty **of misbehaviour or incapacity**, House considers motion.
Parliamentary Approval	➲ Motion must pass both Houses with special majority **(total membership majority + two-thirds present and voting).**
Presidential order	➲ After passage, address sent to **President in same session.** ➲ President issues **removal order.**

Note: There is **no mention of word impeachment for removal of judges in the constitution.**

1.8.3. National Standards for Civil Service Training Institutes (NSCSTI)

➲ Recently, NSCSTI 2.0 framework was launched by the **Minister of State for Personnel, Public Grievances and Pensions.**

National Standards for Civil Service Training Institutions (NSCSTI)

Eight Pillars of Excellence

- Training Needs Assessment and Course Design
- Faculty Development
- Resource and Training Targets
- Trainee Support
- Digitalisation and Training Delivery
- Collaboration
- Training Evaluation and Quality Assurance
- Operations and Governance

About National Standards for Civil Service Training Institutes

➲ Developed by **Capacity Building Commission under Mission Karmayogi** to build a competent, future-ready **civil service for effective service and Atmanirbhar Bharat.**

➲ **Objectives:** Establish baseline capacities in **Central Training Institutes, enhance management tools, and standardise** capacity building with clear procedures.

➲ NSCSTI 2.0 Framework

➲ Introduces hybrid and **AI-driven learning models.**

➲ **Inclusive design** for all government training levels.

➲ Promotes adoption of best practices by bridging **public-private sectors.**

1.8.4. Bills of Lading Bill 2025

Parliament has passed the Bills of Lading Bill 2025.

About Bills of Lading Bill 2025

➲ Updates and simplifies the **legal framework for shipping documents.**

➲ Replaces the **Indian Bills of Lading Act, 1856.**

➲ Bill of lading is a document from freight **carrier to shipper detailing goods' type, quantity, condition, and destination.**

INTERNATIONAL RELATIONS

2.1. India-United Kingdom (UK) Comprehensive Economic and Trade Agreement (CETA)

Why in the News?

India and the UK signed the **Comprehensive Economic and Trade Agreement (CETA)**, strengthening their partnership.

More in the News

- **Major developments apart from CETA:**
  - **India-UK Vision 2035** will guide cooperation over the **next decade in various sectors.**
  - **Defence Industrial Roadmap** was adopted for **joint work on defence products**.

Key Highlights of the CETA

- **Comprehensive Tariff Elimination and Market Access**
  - **Over 99% of tariff lines eliminated**, nearly India's whole trade basket.
    - India opened **89.5% of tariff lines, covering 91% of UK exports.**
  - **Sensitive sectors** (dairy, cereals, gold, jewellery, etc.) protected.
  - **Bilateral safeguards** to prevent harmful import surges.
- **Services: Wider access** for Indian IT, finance, education, healthcare.
- **Mutual Recognition and Professional Mobility**
  - **Professional qualifications** (nursing, accountancy, architecture) to be mutually recognised within a year.
  - UK allows Indian professionals, investors **stays from 90 days up to 3 years.**
  - **Double Contribution Convention exempts Indian workers** and employers from UK social security for 3 years.
  - **Exporters may self-certify product origin**; small consignments under £1,000 need no documents; rules align with India's supply chains.

India–UK Vision 2035 (Strategic Partnership Roadmap)

- **Strategic Vision by 2035:** Partnerships will transform India–UK relations, focusing on strategic goals, innovation, and real benefits.
- **Partnership Framework: Cooperation on six pillars** (Trade - Technology - Defence - Climate - Education - People-to-People Ties).
- **Growth and Trade**: Raise trade volumes, Complete Bilateral Investment Treaty, Improve capital market links, Boost green investments, innovation Support startups.
- **Technology Innovation:** AI/machine learning links 5G/6G telecom cooperation Work on critical minerals, semiconductors, Quantum computing, biotech research, Space, health tech.
- **Defence and Security:** 10-year Defence Roadmap, Joint defence technology, Strengthen Indo-Pacific security, Counter-terror and cyber efforts Joint training.
- **Climate and Energy:** Increase climate finance, Expand offshore wind, Develop green hydrogen, Nuclear energy cooperation, clean transport, Restore ecosystems.
- **Education and Skills Partnership:** UK campuses in India, Joint degrees, Green skills programs, More youth and cultural exchanges.

Significance of CETA for India

- **Export growth**: Exports in textiles, jewelry, machinery expected to rise 20-40%.
- **Geographical Indication protection**: GI products like feni, toddy, Nashik wine protected.
- **Market Access**: UK's $37.5 billion agricultural market opened; over 95% of agricultural and processed food items duty-free.
- **Worker Benefits:** Labour rights ensured, with fair tribunals and enforcement; women benefit from non-discrimination and gender equality.
- **MSME and Regional Growth:** Trade boost aids hubs like Tiruppur (textiles), Kolkata (leather), Surat–Bharuch (chemicals).

Significance of India-UK Relations

- **Economic Cooperation**: Bilateral trade at **USD 56 billion**; target to double by 2030.
  - ➡ UK is 6th largest investor in India with **$35 billion equity to Sept 2024.**
- **Geo-Political:** Cooperation in **UN, UNSC, G20, Commonwealth**, Indo-Pacific; UK supports India's UNSC permanent seat bid.
- **Defence Cooperation**: Regular exercises including **Konkan (naval), Cobra Warrior (air), Ajeya Warrior (army).**
- **Indian Diaspora**: UK hosts **1.864 million** Indians (2021 Census).
- **Education cooperation**: UK universities **opening Indian campuses**; **Southampton's Gurugram campus** first under New Education Policy. About **170,000 Indian students** study in UK.
- **Health Cooperation**: **Joint COVID-19 vaccine R&D** (AstraZeneca and Serum Institute); India-UK agreement supports healthcare **workforce recruitment and training.**

Concerns in India-UK Relations

- **Divergent Foreign Policy Positions**: Differing views on the Russia-Ukraine conflict.
- **UK's Domestic Politics:** UK debates on Kashmir and India's internal issues cause friction, affecting diaspora ties.
- **Khalistan Separatism**: India worries about pro-Khalistan activities in the UK threatening its sovereignty.
- **Extradition hurdles:** Legal delays keep fugitives like Vijay Mallya in the UK, straining trust.

Conclusion

The CETA, under India-UK Vision 2035, is a key milestone boosting trade, technology, defence, climate, and education ties. With the **UK as a P5, G7, Five Eyes member and India as fastest-growing** major economy, both **are at a strategic inflection point**. Leveraging synergies **amid global volatility, they aim to elevate partnership and tackle challenges.**

2.2. India-Maldives Relations

Why in the News?

Indian Prime Minister's visit to Maldives marked 60 years of diplomatic ties.

Key outcomes of the visits

- Extension of **INR 4,850 crores Line of Credit to Maldives** and **reduced debt repayment** on India-funded LoCs.
- Launch of **India-Maldives Free Trade Agreement** negotiations with agreed Terms of Reference.
- Agreement to **launch UPI in Maldives between NPCI International Payment Limited** and Maldives Monetary Authority.
- MoUs signed on **Fisheries & Aquaculture**, **Digital Solutions**, and Indian Pharmacopoeia recognition.

Maldives

Areas of Cooperation

India and Maldives share **ethnic, linguistic, cultural, religious, and commercial bonds.** India was one of the first to **recognize Maldives after its 1965 independence** and set up diplomatic ties.

- **Strategic Location and Proximity**: Maldives sits like a **'toll gate'** between the **western Indian Ocean (Gulf of Aden, Strait of Hormuz) and eastern Indian Ocean** (Strait of Malacca).
  - ➡ Its closeness to **India's west coast and key Indian Ocean** sea-lanes gives Maldives strategic value for India.
- **Net Security Provider:** India is seen as Maldives' **net security provider**, central to India's "**Neighbourhood First**" policy and Vision MAHASAGAR for **Indian Ocean Region** security and growth.
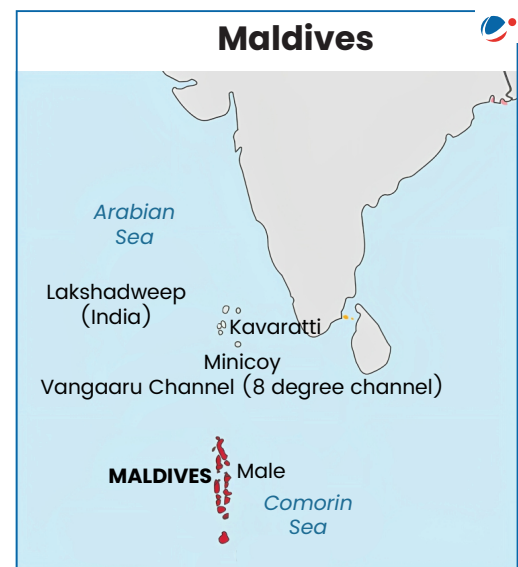
- **Defence Cooperation and Security:** A 2016 Action Plan cements **defence ties; joint exercises include Ekuverin, Ekatha.**
  - ➡ Maldives is a **founding member** of the Colombo Security Conclave.
- **Economic Integration**: Bilateral trade hit USD 548.97 million (2023), **with India as Maldives' largest trading partner.**
- **Humanitarian Diplomacy and "First Responder"**: India has been Maldives' **prompt aid provider during crises like the 1988 coup attempt**, 2004 tsunami, 2014 water crisis, and COVID-19.
- **Extensive P2P Linkages:** India is a **top tourist source**, with over 2.09 lakh Indian arrivals in 2023.

Recent Irritants in the bilateral relations

- **Domestic Politics:** Maldives' politics is split between Anti-India and Pro-India/China camps.
- **Strategic Shift under President Muizzu**: Elected with an "**India out" nationalist campaign,** sparking anti-India actions like survey cancellations and military withdrawal.
  - ➡ Policy moved from "**India first" to "Maldives first**" to diversify foreign ties.
- **China Factor**: Joined China's **BRI in 2014;** China funded key projects like the **Friendship Bridge.**
- **Economic Instability:** Public debt may hit **135.7% of GDP by 2027** with fiscal deficits and slower growth (World Bank).
- **Radicalization:** US listed **ISIS and Al Qaeda** facilitators in Maldives in 2023.

Conclusion

India and Maldives share **Indian Ocean challenges impacting security and development**; they must cooperate closely for their and the region's benefit.

2.3. China's Hydropower Project on the Brahmaputra River

Why in the News?

China began building the **Medog mega dam on the Yarlung Zangbo (Brahmaputra) River in Tibet.**

More on the News

- Besides power, **it aims to industrialize Tibet**.
- China calls it **a renewable energy project and an economic boost for Tibet**, supporting carbon **neutrality by 2060.**

About the Medog Hydropower Project

- **Scale and Capacity**: Will surpass **Three Gorges Dam**, generating three times more energy.
- **Location:** At the Great Bend of **Yarlung Tsangpo River**, near Arunachal Pradesh border.
- **Project design**: **A run-of-the-river type** with five cascade plants, diverting half the river's flow.

China's Tsangpo Project Will Be World's Largest

Key Concerns of the Project

- **Geopolitical Concerns:** Water flow disruption **threatens Northeast India's agriculture, food security**, and hydro projects (e.g., 2000 Siang River disaster).
  - ➡ Security risks as a **potential water weapon in conflicts.**
- **Water Resource Competition:** Brahmaputra basin faces contest among **India, China, and Bangladesh** over dams and diversion, risking regional stability.
- **Environmental Impact:** Sediment **flow disruption harms Ganges-Brahmaputra** Delta, threatens **218 fish species,** including Hilsa and Mahseer, risking two million livelihoods.
- **Disaster Vulnerability: Located in Seismic Zone V**, prone to earthquakes and landslides.
  - ➡ **Dec 2024's 7.5 quake** in Tibet highlights dam failure risks.

Existing River Water Cooperation Mechanism between India and China

- ➲ **Expert Level Mechanism (2006):** Annual talks on flood data, emergencies, and trans-border river issues.
- ➲ **Brahmaputra Data Sharing:** MoU for June–October data from three Tibetan stations; expired in June 2020, renewal pending.
- ➲ **Sutlej Data Sharing:** MoU for June–October data from one station; expired 2020, renewal pending.
- ➲ **Umbrella MoU (2013):** Extended data sharing to May 15–October 15, broadening cooperation.

Way Forward

- ➲ **India's Potential Response:**
  - ➡ **Strategic countermeasures: Plan Siang Upper Multipurpose hydropower** project in Arunachal Pradesh, proposed by **Niti Aayog in 2017**.
  - ➡ **Transparency Demands:** Demand full disclosure of **technical, environmental, seismic plans**; press for suspension until resolved.
- ➲ **Regional Coalition**: Unite downstream nations for **binding water-sharing under 1997** UN Water Convention with data sharing and joint assessments.
- ➲ **Transboundary Cooperation:** Advocate for agreements like **China-Kazakhstan's to protect India's co-riparian rights.**
- ➲ **Water Security Framework**: Consider South Asia Water **NATO for Brahmaputra**, **Indus, Ganges to ensure data transparency,** dispute resolution, and disaster readiness, using Nile Basin and Mekong models.

2.4. India-Africa Relations

Why in the News?

The Prime Minister visited Ghana and Namibia, **stating "Africa's goals are India's priority."**

More on the News

- ➲ He also received national honor - **Officer of the Order of the Star of Ghana.**
- ➲ Both agreed to **upgrade to Comprehensive Partnership.**
- ➲ India's Africa policy builds on old ties, **focuses on current needs, using a consultative, demand-driven approach** under Kampala Principles from 2018.

Strategic significance of Africa for India

- ➲ **Strategic and Geopolitical**: Africa partners with India on global south issues, **UN/WTO reforms, and peace.**
  - ➡ **Example**: African Union's G20 membership and **Asia-Africa Growth Corridor launched in 2017.**
- ➲ **Defence:** India and Africa engage through Indian Ocean groups and exercises **like MILAN and Cutlass Express.**
  - ➡ Indian Navy started **Africa India Key Maritime Engagement**.
- ➲ **Economic**: Africa offers young markets and key minerals (**cobalt, manganese) vital for India.**
  - ➡ Africa holds nearly **half of global cobalt and manganese.**
  - ➡ India is Africa's **third-largest trading partner.**
- ➲ **Trade Basket**: India exports **fuels, food, meds**; imports oil, diamonds, copper.
- ➲ **Market Access**: India provides **duty-free access to Least Developed Countries** via its tariff scheme.
- ➲ **India's Soft Power:** Technical cooperation, scholarships, and **tele-education/medicine reach many African nations.**
- ➲ **Technology**: India shares digital tech like **UPI and RuPay, launched in Mauritius.**
- ➲ **Energy Security:** Africa has huge renewable potential; **International Solar Alliance helps solar projects.**

Concerns in India-Africa relations

- ➲ **Project delays** due to procedural, funding, and logistical issues.
- ➲ Africa **lacks permanent UN Security Council representation**.
- ➲ India faces **competition from China's** faster, larger investments.
- ➲ **Security risks** from political unrest and terrorism threaten Indian interests.

Conclusion

Africa remains central to **India's foreign policy.** India aims for sustainable **South-South cooperation through capacity-building, local ownership, and moral diplomacy.**

2.5. India Latin American and Caribbean Countries Ties

Why in the News?

The Prime Minister recently visited **Trinidad and Tobago, Argentina, Brazil, and attended the 17th BRICS Summit in Rio.**

More on the News

⊃ Received **Order of the Republic of Trinidad & Tobago.**

⊃ Announced extension of **OCI cards to sixth-generation diaspora** in Trinidad & Tobago.

Significance of Latin America and Caribbean (LAC)-India Relations

⊃ **Strategic:**
  ➜ **Defence Cooperation**: India and Brazil enhanced ties via Joint **Defence Committee and 2+2 dialogue.**
  ➜ **Critical Minerals: KABIL agreed with CAMYEN** for lithium blocks in Argentina; Lithium Triangle holds 75% global reserves.
  ➜ **Food Security:** Latin America supplies **edible oils and pulses;** Argentina is a key soybean oil source.

⊃ **Economic & Trade Relations:**
  ➜ **Trade and Investments:**
    ◆ Trade reached **USD 35.73 billion in 2023-24; Indian firms invested USD 12 billion** in IT, **pharma, energy, mining, manufacturing, and agro-chemicals.**
    ◆ India has a Preferential **Trade Agreement with MERCOSUR.**
  ➜ **Energy Security:**
    ◆ Crude oil from **Venezuela, Mexico, and Brazil makes up 30% of India's regional imports.**
    ◆ India extended US$140 million **Line of Credit to CARICOM** for solar and climate projects.

⊃ **Cooperation at Regional and Multilateral Fora:**
  ➜ Collaborates in **G20, BRICS, IBSA, G4** with Argentina and Brazil.
  ➜ Engages with **Community of Latin American and Caribbean States** (**CELAC), CARICOM, and Central American Integration System (SICA).**

> ### About MERCOSUR
> ⊃ **Overview:** It is a **Southern Common Market** (MERCOSUR for its Spanish initials) in Latin America.
> ⊃ **Genesis:** Formed in 1991 with the objective of free movement of goods, services, capital and people.
> ⊃ **State Parties:** Argentina, Bolivia, Brazil, Paraguay, Uruguay. (Venezuela is currently suspended)
> ⊃ **Associate Members:** Chile, Colombia, Ecuador, Guyana, Panama, Peru, Surinam.
> ⊃ **Headquarter:** Montevideo, Uruguay

⊃ **Challenges**
  ➜ China has **strong Latin America ties**; trade grew 35 times since 2000.
  ➜ MERCOSUR faces **internal splits**; Brazil and Uruguay seek bilateral deals, Argentina may exit.
  ➜ High transport costs **due to distance limit engagement**.
  ➜ Latin America is a **low priority** in India's foreign policy.
  ➜ Language barriers and **weak diaspora presence.**

⊃ **Way Forward**
  ➜ **Prioritize political dialogues**, make Latin America a foreign policy focus.
  ➜ Strengthen economic ties via tariff cuts, **regulations, and free trade deals.**
  ➜ Improve connectivity with **direct shipping, air links**, and freight corridors.
  ➜ Expand tech collaboration in **renewables, agriculture, IT, and climate resilience.**
  ➜ Mobilize private sector **through trade missions and incentives.**

Conclusion

India can deepen **Latin America ties with a proactive strategy** addressing trade, investment, culture, and logistics, building a strong partnership based on **shared values and development goals.**

2.5.1. India-Brazil

Why in the News?

Indian PM received Brazil's highest **civilian award, the Grand Collar of the National Order of the Southern Cross.**

Key Agreements Signed During Visit

- ➲ Cooperation on **terrorism and transnational crime**.
- ➲ **MoU on digital solutions** exchange for transformation.
- ➲ Exchange and protection of **classified information.**
- ➲ MoU on **renewable energy, agriculture, and intellectual property.**
- ➲ **Created a ministerial mechanism** for trade and investment monitoring.

Priority Pillars for the Next Decade: Defence and Security, food and nutritional security, energy transition and climate change, etc.

About India-Brazil Relations

- ➲ **Bilateral Cooperation**: Strategic Partnership from 2006.
- ➲ **Global Cooperation:** Engage actively in plurilateral fora (BRICS, BASIC, G-20, G-4, IBSA) and multilateral bodies (UN, WTO, UNESCO, WIPO).
- ➲ **Trade**: In 2024-25, bilateral trade reached USD 12.20 billion with India in trade surplus.
- ➲ **Defence Cooperation:** 2006 agreement established Joint Defence Committee (JDC).
- ➲ **Renewable Energy**: Brazil co-founded Global Biofuel Alliance and ratified ISA Agreement in 2022.

2.6. BRICS Rio de Janeiro Declaration

Why in the News?

At the 17th BRICS Summit, leaders signed the **Rio Declaration on strengthening Global South cooperation for inclusive, sustainable governance.**

Key Highlights of the BRICS Summit

- ➲ **Participation**: First summit with **11 full members, 10 partners, 8 invited nations**, and many international reps.
  - ➡ Welcomed **Indonesia as member**, Belarus, Bolivia, Kazakhstan, Cuba, Nigeria, Malaysia, Thailand, Vietnam, Uganda, Uzbekistan as partners.
- ➲ **Launch of Partnership for Elimination of Socially Determined Diseases (SDDs):** To boost **cooperation and resources to eliminate SDDs** linked to poverty and inequality in the Global South.
- ➲ **BRICS Leaders' Framework on Climate Finance**: Roadmap for five years **to enhance climate change resource mobilization.**
- ➲ **BRICS Leaders' Declaration on Global AI Governance**: Principles on **digital sovereignty, UN multilateralism, responsible AI development, fair competition, data fairness**, environmental sustainability, and ethical AI.

SDD Partnership: 5 Core Objectives
- Resilient Health Systems & Access
- Whole-of-Society Action on Determinants
- R&D, Capacity & Technology Transfer
- Sustainable & Innovative Financing
- Global Alignment & SDG Coherence
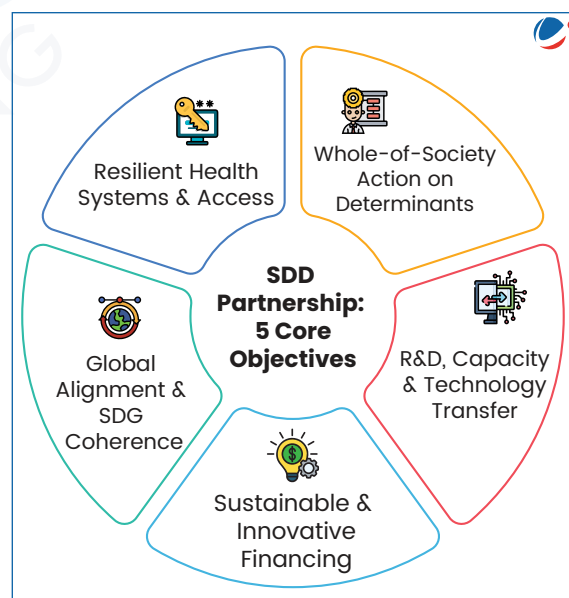
BRICS Leaders' Framework Declaration on Climate Finance

- ➲ **Climate Finance Goal:** Calls on developed countries to provide **USD 300 billion yearly by 2035 to developing nations**, meeting USD 100 billion yearly target through 2025.
- ➲ **Innovative Financial Instruments:** Supports blended **finance, guarantees, insurance, thematic bonds, forex risk mitigation**, and regulatory incentives.
- ➲ **Tropical Forest Forever Fund (TFFF):** Recognized as a **mechanism to fund tropical forest conservation, launched at COP28 UAE.**
  - ➡ Aims for **large-scale, predictable payments** combining public and private funds, targeting USD 4 billion annually.
  - ➡ Payments based on **each country's preserved tropical forest area.**

BRICS and Global South Cooperation

Rio de Janeiro Declaration **underscores BRICS' commitment to the Global South**.

- ➲ **Strengthen Global Governance**: Calls for more **developing countries' roles in global decisions**, transparent UN leader selection, and UN reforms supporting Brazil and India.
- ➲ **Multipolarity and Global South:** Highlights **Global South's role amid geopolitical tensions**, economic slowdown, tech change, and protectionism.
- ➲ **Bretton Woods Institutions Reform:** Urges governance **reforms with merit-based, inclusive selection** and diversity.
- ➲ **Trading System**: Warns against **unilateral tariffs; supports fair, open, consensus-based WTO** trade system.
- ➲ **International Economic Cooperation:** Pushes for **BRICS Economic Partnership 2030** and **BRICS Multilateral** Guarantees pilot to reduce investment risk.

Conclusion

Rio declaration commits **BRICS to tackle global issues** and build **a multipolar world based on equity, cooperation**, **and shared prosperity**, shaping global governance's future.

2.7. Geelong Treaty under AUKUS

Why in the News?

Australia and the UK recently signed the **Geelong treaty under AUKUS Pillar I** for 50 years of **defence cooperation.**

About Geelong Treaty

- ➲ Also called **Nuclear-Powered Submarine Partnership Treaty**, it supports security in Euro-Atlantic and Indo-Pacific.
- ➲ **Objective:** Cooperate on design, build, operation, sustainment, disposal of SSN-AUKUS submarines and develop strong trilateral supply chains.
- ➲ Complies with nuclear **non-proliferation and AUKUS Naval Nuclear Propulsion Agreement.**

About AUKUS

- ➲ Established 2021, a security partnership between **Australia, UK, and US.**
  - ➡ **It has Two Pillars:**
    - ◆ **Pillar 1:** Develop shipbuilding, including Australia's **first nuclear-powered attack submarines (SSNs).**
    - ◆ **Pillar 2**: Joint development of **eight advanced military capabilities like AI, autonomy, electromagnetic warfare, modelling, simulation.**
- ➲ US will sell **submarines to Australia in 2030s**; UK and Australia to **co-produce submarines by early 2040s.**
- ➲ **Strategic Significance of AUKUS**
  - ➡ **Strengthens US-led alliance** in Indo-Pacific to counter China and show US commitment.
  - ➡ **Enhances US military presence** and access in Southeast Asia.
  - ➡ **Boosts US defence industry** via arms sales and tech transfers to Australia and UK.

Opportunities and Challenges of AUKUS

Opportunities of AUKUS	Concerns with respect to AUKUS
➲ **High trust among AUKUS nations**, shown by Five Eyes intelligence sharing. ➲ **Complements QUAD** by focusing on hard power in Indo-Pacific. ➲ **Synergy between UK and Australia** aligns with their defence strategies. ➲ US shifts **regional security to boosting partners** amid China challenge. ➲ Nuclear submarines offer **faster response (~20 knots) and longer endurance** than conventional.	➲ USA reviewing AUKUS; **expects Australia to increase defence spending** for greater burden-sharing. ➲ AUKUS may undermine **QUAD's relevance**; **India's reluctance** often seen as **limiting Quad's military potential.** ➲ **No Asian members** in AUKUS, unlike QUAD, seen as Western-dominated. ➲ **Delivery issues:** US submarine production (1.13/year) below what's needed for AUKUS. ➲ Risk of **nuclear proliferation and arms race** in the Pacific.

Conclusion

India can develop unique ties **with the USA and allies to boost its national power** and **regional peace** contribution.

2.8. Girmitiya Community

Why in the News?

On his Trinidad and Tobago visit, the Prime Minister **announced plans to create a Girmitiya community database and hold regular World Girmitiya Conferences.**

More on the News

➲ Extension of **OCI cards to the sixth generation** of the Indian diaspora in Trinidad and Tobago.
➲ Trinidad and Tobago **is the first country in the region** to adopt India's **Unified Payments Interface (UPI).**

About Girmitiyas

➲ Girmitiyas were Indian **indentured labourers** who migrated in the **19th century after Britain's Slavery** Abolition Act 1833 caused labour shortages.
  → "**Girmit**" is a mispronunciation of "**Agreement**," the migration contract.
  → They worked on **sugar plantations, tea gardens, and many settled in colonies.**
➲ **Distribution:** Mauritius, Fiji, West Indies, South Africa, Caribbean (mainly Trinidad and Tobago, Guyana, Suriname, and Jamaica).
➲ **Source Regions**: Mostly eastern **United Provinces and Bihar.**
  → Motivated by **poverty, unemployment, poor agriculture in homeland and better colony prospects.**
  → In colonies, **workers faced poverty, lacked wages**, food, and clean water.
  → Tamils from **Madras regions went to Ceylon, Burma, and Malaysia.**

Significance of Girmitiyas for India

➲ **Deep cultural ties**: Majority in Mauritius, Guyana, Trinidad and Tobago, Suriname, preserving Indian traditions locally.
  → **Festivals:** Diwali, Ramleela, Hosay celebrated.
  → **Folk Songs**: North Indian songs popular in Fiji and Surinam.
  → **Instruments:** Use of Dhanatal, dholak, harmonium, Dandatal.
  → **Language:** Hindi, Bhojpuri, Awadhi spoken widely.
➲ **Political:**
  → Soft power in multilateral **forums like UN, WTO.**
  → **Hold top government roles**, e.g., Prime Ministers in Mauritius and Trinidad and Tobago.
➲ **Economic:** Source of philanthropy, info exchange, investments, notably Mauritius accounts for 17% of India's FDI in FY 2024–25.

Conclusion

Introducing **Girmitiyas' history in Indian schools** is vital to preserve their **culture, art, and heritage, highlighting their importance.**

2.9. News in Shorts

2.9.1. Kaladan Multimodal Transit Transport Project (KMTTP)

Union Minister said KMTTP will be operational by 2027.

➲ Jointly identified by **India and Myanmar for multi-modal cargo transport** from **India's Eastern Ports to Myanmar and North-Eastern Region (NER)** through Myanmar.

About KMTTP

➲ Framework Agreement signed in **2008.**
➲ **Nodal Ministry**: Ministry of External Affairs

➲ **Project Development Consultant:** Inland Waterways Authority of India (IWAI).
➲ **Transit Components:**
➲ **Waterway:** Kaladan River from **Sittwe Port to Paletwa in Myanmar**.
➲ **Road**: **Paletwa to Zorinpui** on India-Myanmar border in Mizoram.

Significance of KMTTP for India

➲ **Ends North East Region's geographic isolation** bypassing "**Chicken's Neck**" corridor.
➲ **Aligns with India's Act East Policy** for neighbourhood connectivity.

- **Cuts transport cost** and time from Kolkata to Aizwal by over 50%.
- **Develops NER as business hub,** boosting trade and export industries.

Kaladan Multimodal Transit Transport Project
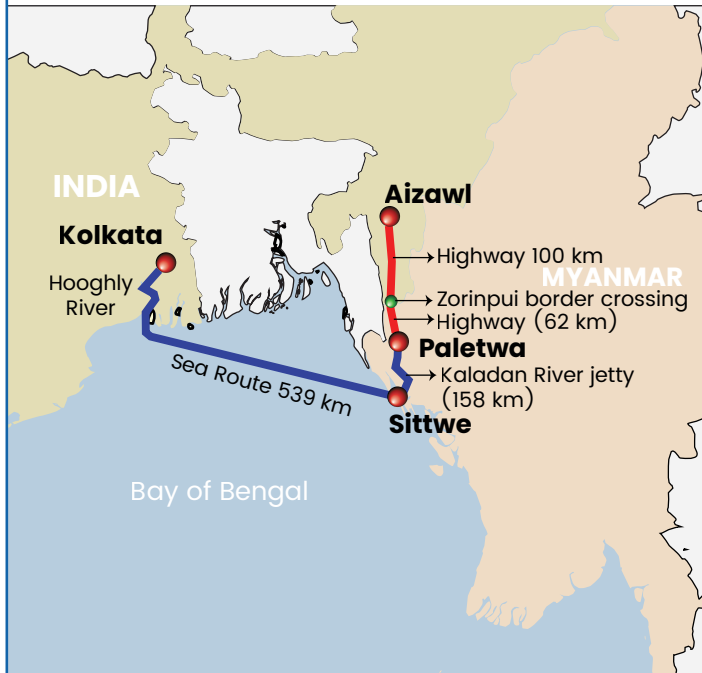
Other Connectivity Projects for NER

- **India-Myanmar-Thailand Trilateral Highway**: Links Moreh (Manipur) to Mae Sot (Thailand) via Myanmar.
- **Protocol on Inland Water Transit and Trade (PIWT&T):** Lets vessels of India and Bangladesh use each other's waterways.
- **Others:** BBIN Motor Vehicle Agreement; MoU on using Chattogram and Mongla Ports of Bangladesh.

2.9.2. US decides to pull out of UNESCO

The withdrawal was announced due to the agency's support for woke, divisive causes, and anti-Israel bias.

- This is the **third US exit from UNESCO** and **second** under current leadership.
- The US also moved **to leave other UN bodies** like **WHO and cut funding** to the UN Relief and Works Agency for Palestine.

Impact of US withdrawal

- **Budget**: US gives about **8%** of UNESCO's budget.
- **Geopolitics**: Withdrawal **may boost influence of powers like China.**
- **Multilateralism:** Leaving a UN body **could weaken trust** in global cooperation.

About UNESCO

- **UN specialized agency** promoting **peace through education, science, and culture**.
- **Headquarters**: Paris
- **Membership:** 194 Members and 12 Associate Members
- **Key Initiatives:**
  - → Global Education Monitoring Report
  - → World Heritage Sites
  - → World Trends in Freedom of Expression and Media Development
  - → Man and Biosphere Programme

2.9.3. Group Of Friends (GoF)

India reiterated its commitment to **justice for crimes against UN peacekeepers** at **the Group of Friends (GOF) meeting.**

About GOF

- **Indian-led initiative** promoting accountability for violence against UN peacekeepers.
- Launched in **2022.**
- Drives **United Nations Alliance of Civilizations (UNAOC)** strategic planning and implementation.

2.9.4. Pact For Future

India reaffirms commitment to **'Pact for Future' at UN dialogue.**

About 'Pact for Future'

- Adopted **at 2024 Summit of the Future.**
- **It Includes:**
  - → Global Digital Compact (first comprehensive digital cooperation framework).
  - → Declaration on Future Generations.
- **Features**: Clear commitments on human rights, gender, and sustainable development.
- **Key Areas of commitments**
  - → Sustainable development and financing.
  - → International peace and security.
  - → Science, technology, and digital cooperation.
  - → Youth and future generations.
  - → Transforming global governance.

2.9.5. International Criminal Court (ICC)

International Criminal Court welcomed **Ukraine as 125th State Party to the Rome Statute.**

About the ICC

- **First permanent international court** prosecuting genocide, war crimes, crimes against humanity, aggression.
- Established by **Rome Statute (adopted 1998, effective 2002).**
- India is **not a party** to the Rome Statute.
- **HQ:** The Hague, Netherlands.

2.9.6. E3 Countries

Iran threatened with snapback sanctions by **E3 countries amid stalled U.S.-Iran nuclear talks.**

⭗ **Snapback sanctions (under 2015 JCPOA)** allow reimposing sanctions if Iran breaches nuclear commitments.

About E3 countries

⭗ **Informal security** cooperation between UK, Germany, and France.

⭗ Formed after **US attacked Iraq in 2003** to coordinate Iraq strategy and manage Iran nuclear risks.

2.9.7. Global Peace Index, 2025

19th Global Peace Index (GPI) **released by Institute for Economics and Peace (IEP).**

About Global Peace Index (GPI)

⭗ Covers **163 states** and **territories.**

⭗ **Uses 23 indicators in three areas:**
  ➡ Societal Safety and Security.
  ➡ Ongoing Domestic and International Conflict.
  ➡ Degree of Militarization.

⭗ **Key Findings**:
  ➡ Global peacefulness **declined overall.**
  ➡ South Asia, **second least peaceful region**, showed largest drop.
  ➡ **Ranking:** Iceland 1st, India 115th, Russia last (163rd).

2.9.8. Red Sea

Red Sea cargo ships attacked; Houthis claim sinking vessel.

Red Sea

⭗ **Marginal sea** in northwest Indian Ocean.

⭗ Connects **Gulf of Aden via Bab El Mandeb Strait and Mediterranean** via Suez Canal.

⭗ **Borders:** Egypt, Sudan, Eritrea (West); Israel, Jordan (Northeast via Gulf of Aqaba); Saudi Arabia, Yemen (East).

⭗ Northern part **splits into Gulf of Suez (NW) and Gulf of Aqaba (NE).**

⭗ One of the saline seas, as it receives **very little precipitation in any form,** and no water enters the Red Sea from rivers.

Red Sea

2.9.9. New Caledonia

France agrees to give New Caledonia more autonomy.

⭗ Agreement creates **"State of New Caledonia"** within France, granting more freedoms but no independence.

New Caledonia

⭗ **French** overseas territory in the Pacific Ocean.

⭗ **History:** Islanders enslaved in **1840**s; annexed by France in **1853**.

⭗ Current issue: Divisions between **indigenous Kanak and Europeans over independence.**

New Caledonia

2.9.10. M23 Rebels

Democratic Republic of Congo (DRC) and **Rwanda-backed M23 rebels** agreed to permanent ceasefire in eastern Congo.

About M23 rebels

⭗ M23, **mainly ethnic Tutsis, fights Congolese forces** in mineral-rich eastern DRC.

⭗ Named after **2009 accord date between CNDP (Tutsi-led)** and **Congolese government.**

⭗ Formed in **2012 by CNDP members** protesting failed accord implementation, **minority protection, and fair resource sharing.**

M23 Rebels
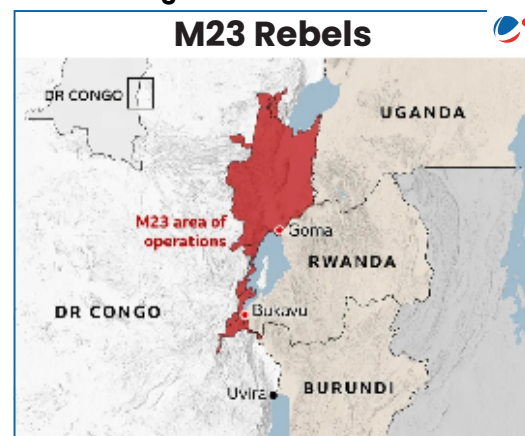
2.9.11. Henley Passport Index 2025

India's Henley Passport Index rank improves **from 85 (2024) to 77 (2025).**

➲ Indians can visit **59 destinations visa-free** or **with visa on arrival.**

About Henley Passport Index

➲ Authoritative ranking of passports by **visa-free access.**

➲ Based on **International Air Transport Association (IATA) data.**

➲ **Singapore** ranks first.

ECONOMICS

3.1. Prime Minister Dhan-Dhaanya Krishi Yojana (PMDDKY)

Why in the News?

In pursuance of the Union Budget 2025–26 announcement, PMDDKY was approved for a period of six years.

Salient Features of the Scheme:

- **Budgetary Allocation:** ₹24,000 crore annually for a period of six years.
- **Implemented By:** Ministry of Agriculture and Farmers' Welfare and monitored **through three-tier structure National-level oversight bodies**, State-level nodal committees, and District Dhan Dhaanya Samitis with **NITI Ayog review.**
- **Saturation-Based Convergence: Consolidates central, state** schemes and local partnerships.
- **Progress tracking**: Using 117 Key Performance Indicators (KPIs).
- **Transparency and Accountability:** Digital dashboard, farmer app, and district ranking system.
- **Criteria and Selection of Districts:** NITI Aayog will finalize 100 districts based on **Low Crop Productivity, Moderate Cropping Intensity, Credit Access, Geographic Representation.**

Significance of PMDDKY

- **Provides Access to High-Yielding Seeds**, bio-fertilizers, and mechanized tools like seed drills.
- **Drip and sprinkler systems** to ensure water availability, especially in dry regions.
- **Provide subsidies** and loans through Kisan Credit Cards or NABARD.
- **Provision of Village and block-level warehouses** and cold storage to prevent spoilage.
- **Promotes diversification** into high-value crops, direct market access through digital platforms like e-NAM etc.
- **Promotes Organic farming**, climate-resilient crops.
- **Includes Krishi Vigyan Kendras (KVKs)**, agricultural universities workshops, overseas training, etc.

3.2. Public Debt in India

Why in the News?

Reserve Bank of India (RBI) in its **Biannual Financial Stability Report (FSR) 2025** found rising public debt.

Key highlights of the report

- Growth projection **at 6.5% in 2025–26.**
- **Inflation Trends:** CPI inflation 6-year low 2.8% in May 2025 with concerns of **Imported Inflation from** tensions in the Middle East.
- **Rising Public debt: High as percentage of GDP in 2024** (More than 80%) compared to **Emerging Market Economies (EMEs).**

Public debt

- **Internal debt**
  - Marketable Securities
    - G-sec, T-Bill, and Cash Management Bills
  - Non-Marketable Securities
    - Intermediate T-Bills, Securities against Small Savings, etc.
- **External debt**
  - Most of the external debt is from multilateral agencies such as IDA, IBRD, ADB etc

About Public Debt in India

- **Public debt**, also known as 'national debt', is the accumulated amounts of borrowing that **government, and other public sector bodies**, owe to the private sector and foreign governments.
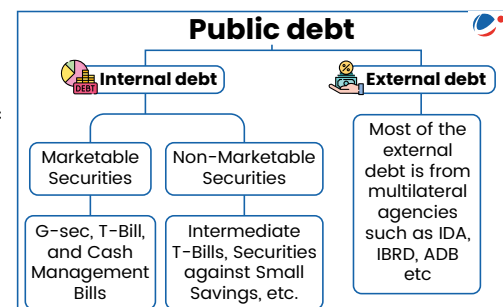
➜ **Internal debt is 96.59%** and external debt is **3.41%** of total public debt of 18,174,284 crore.

⮕ **Impact of High Public debt:** Increased interest costs, limited fiscal space, potential inflationary pressures, crowding out of private investment and impact growth and intergenerational equity.

Legal framework for management of public debt in India

⮕ **Fiscal Responsibility and Budget Management (FRBM) Act, 2003:** It sets a target of containing Central Government Debt to 40% and **General Government debt** to **60% of GDP** by 2024-25.

⮕ **RBI Act, 1934:** RBI to manage the Central Government public debt.

Reasons of high Public Debt in India

⮕ **Persistent Fiscal Deficits, High Revenue Expenditure due to subsidies,** Salary, etc. **External Debt Growth (10%** to $736.3 2025 from $668.8 billion in 2024), **Pandemic-Era Spending.**

Way Forward to manage and reduce Public Debt in India

⮕ **Target** a declining debt-GDP ratio to **50±1 %** by March 31, 2031.

⮕ **Debt Management via Bond Switching:** Replacing shorter duration sovereign bonds with long-duration.

⮕ **Subsidy Rationalization & Tax Reforms.**

⮕ **Establish Public Debt Management Authority**

3.3. Employability and Skilling In India

Why in the News?

Recently the Union Cabinet approved the **Employment Linked Incentive (ELI) Scheme.**

About Employment Linked Incentive (ELI) Scheme

⮕ **Background:** Announced in the Union Budget **2024-25.**

⮕ **Nodal Ministry**: Ministry of Labour & Employment.

⮕ **Purpose:** Promote job creation, enhance employability, skilling and expanding social security.

⮕ **Target**: 3.5 crore jobs (including first-time employees)

⮕ **Part A- Incentives for First-Time Employees:**
  ➜ **Eligibility**: First-time employees registered with EPFO: salary up to ₹ 1,00,000.
  ➜ **Benefit**: One month's EPF wage (max ₹ 15,000) paid in two instalments after 6 month & 12 months

⮕ **Part B Support to Employers**:
  ➜ **Employer Eligibility**: EPFO-registered establishment.
  ➜ **Benefits for Additional Hiring**: Financial assistance for each additional employee with sustained employment of at least 6 months.
  ➜ **Incentive to Employers**: ₹ 1,000-₹ 3,000 per employee per month for 2 years, with manufacturing sector gets an extra 2 years.

About Employability and Skilling In India

⮕ **Employability:** Over **50% of graduates** (**53.47%** for Male and **46.53%** for Female) are employable in 2024, up from **33% a decade ago** (17% rise) (India Skills Report 2025).

Challenges Existing In India's Employability and Skilling Landscape

⮕ **Mismatch Between Education and Industry Needs.**

⮕ **Threat from Automation:** 69% of jobs in India face automation risk (World Bank).

⮕ **Limited Emphasis on Soft Skills Development.**

Key Initiatives Taken for Employability And Skilling

⮕ **Skill India Mission (SIM):** Constitute PM Kaushal Vikas Yojana (PMKVY) 4.0.

⮕ **Skill India Digital Hub (SIDH) platform:** Integrate skilling, education, employment, and entrepreneurship

⮕ **India Skills Accelerator:** launched by Ministry of Skill Development and Entrepreneurship **(MSDE)**, in collaboration with the **World Economic Forum (WEF)**

3.4. The Future of Work

Why in the News?

Tata Consultancy Services (TCS) recent announcement to **lay off 12,000 employees** has raised implications on **Future of Work.**

About Lay Offs

- Lay-off means the **failure, refusal or inability of an employer** due to various reasons (shortage of coal, power or raw materials or natural calamity etc.) to give employment to a workman in worker list.
- Many **Multinational corporations** have let go more than **1, 05,000 positions** this year worldwide.
- **Legal Provisions related to Layoffs**: Industrial Disputes Act, 1947, Four Labour codes.

About Future of Work

- The future of work refers to the **ongoing transformation** of how work is performed, organized, and experienced, driven by technological, economic, and demographic shifts.
- **Key Drivers of Future of Work**: Economic Uncertainty, Skill gaps, demographic shifts(Aging, new workforce), job creation, geoeconomic fragmentation(Russia- Ukraine war etc), Green transition, Tech disruptions(AI etc).

How these drivers impact the Future of Work?

- **Economic Impact: Shift in job types** from routine, manual jobs to high-skill, knowledge-based and service-oriented roles, **Jobs to be replaced by AI, Productivity boost**, **Job growth.**
- **Workforce & Skills Impact**: Reskilling & up skilling, Skill Instability.
- **Social Impact:** Wage and opportunity gaps, **Gender inequality, Tribal development.**

Initiatives taken by Government for Future of Work

- **Skilling, Upskilling and Reskilling**
  - **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**.
  - **FutureSkills Prime** is a digital skilling initiative by NASSCOM & MEITY.
- **For adoption of New & Emerging Technologies**: AI for India 2030 initiative.
  - **National Mission on Interdisciplinary Cyber Physical System (NM-ICPS)**
- **For Health and Well-being**: National Tele Mental Health Programme.

3.5. Research Development and Innovation (RDI) Scheme

Why in the News?

The Union Cabinet recently approved RDI Scheme.

About RDI Scheme

- **Nodal Department:** Department of Science and Technology.
- **Key objective of the scheme**
  - **Encourage the private sector to scale up** research, development, and innovation (RDI) **in sunrise and other domains**.
  - **Finance transformative projects** at higher levels of Technology Readiness Levels (TRL).
  - **Support acquisition of technologies**.
  - Facilitate setting up of a Deep-Tech Fund of Funds.
- **Funding and Financial Support**
  - **Total Budget**: ₹1 lakh crore
  - **Modes of Financing**: Long-term loan at low or nil interest rates, Equity infusion, especially in case of startups, Contributions to Deep-Tech Fund of Funds.
  - **Exclusions**: Grants and short-term loans.

Technology Readiness Levels (TRL)

- **Technology Readiness Levels** (TRLs) are a 9-point scale, originally developed by **NASA**
- It used to assess how **mature a technology** is—from the idea stage (TRL-1) to market-ready (TRL-9).

Level	Description
TRL 9	System Test, Launch & Operations
TRL 8	System/Subsystem Development
TRL 7	
TRL 6	Technology Demonstration
TRL 5	Technology Development
TRL 4	
TRL 3	Research to Prove Feasibility
TRL 2	Basic Technology Research
TRL 1	

➜ **Coverage**
  ◆ Financing can cover up to 50% of assessed project cost for transformative RDI projects at TRLs 4 and above;
  ◆ Exceptions may be approved by the Empowered Group of Secretaries (EGoS)

⇨ **Implementation Structure**
  ➜ The governing board of ANRF will provide strategic direction to RDI Scheme.
  ➜ **Second-Level Fund Managers:** May include Alternate Investment Funds (AIFs), Development Finance Institutions (DFIs), IIT Research Parks, etc.

Significance of the Scheme

⇨ Recognize Private sector role in R&D
⇨ Catalyst for Private Sector Investment
⇨ Driving Commercialization
⇨ Fostering Self-Reliance
⇨ Creates and maintains jobs

Challenges in Research and Development in India

⇨ **Low R&D Investment and Diversification:** 0.6–0.7% of GDP over the past two decades.
⇨ **Limited State-level R&D funding:** During 2020–21, States accounted for only 6.7% of national R&D spending.
⇨ **Limited Collaboration:** Underdeveloped **"Triple Helix" model** (Interaction between Academia, Industry, and Government).
⇨ **Underutilization of Funds, Insufficient Recognition of Scientific Talent**

Way forward

⇨ Increase and Diversify R&D Fund: Raise Gross Expenditure on R&D (GERD) to at least 2% of GDP by 2030.
⇨ State-Specific S&T Need Mapping.
⇨ Strengthen Institutional Structures like CSIR innovation hubs.
⇨ Foster Industry–Academia Collaboration: Like ISRO–industry partnerships in satellite manufacturing.
⇨ Efficient Resource Utilisation: Adopt output-based funding.
⇨ Recognise and Retain Scientific Talent: Expand fellowships like Prime Minister's Research Fellowship (PMRF) and introduce global talent repatriation schemes.

Government initiatives to boost R&D in India: Anusandhan National Research Foundation (ANRF), National AI Mission, Atal Innovation Mission (AIM), National Quantum Mission (NQM)

3.6. Financial Inclusion in India

Why in the News?

The RBI Financial Inclusion Index (FI-Index) has risen to **67** in 2025, up by 24.3% since 2021.

Financial Inclusion Index:

⇨ **FI-Index** captures financial inclusion across the country while representing different sectors such as banking, investment, insurance, pension etc. Three sub-indices of index i.e. Access, Usage and Quality.
⇨ **Key Drivers**:
  ➜ Government initiatives – PMJDY, NSFI (2019–24), Aadhaar KYC, Digital India.
  ➜ Technology – UPI, JAM trinity, AI/ML tools for fraud detection & customer service.
  ➜ Institutions – MFIs (2nd largest globally), SHGs (13.4 mn+), Bank Sakhis, PSL.
⇨ **Significance**: Supports SDGs, entrepreneurship, resilience, digital innovation, and rural development.
⇨ **Challenges**: Account inactivity, gender gap, weak infrastructure, low device access, financial illiteracy, credit constraints, digital divide.
⇨ **Way Forward**: Focus on unbanked, tech-driven ecosystem (RIAs, CBDC), promote ONDC & OCEN, strengthen data privacy & cybersecurity, adopt targeted PPP-based policies.

3.7. Digital India Mission

Why in the News?

India is celebrated **10th years of the Digital India Mission** launched in 2015.

About Digital India Mission

- **Implemented by** Ministry of Electronics and Information Technology (MeiTY).
- **Aims** to build a digitally empowered society and knowledge economy through PPPs. Its vision rests on three areas—digital infrastructure, governance on demand, and digital empowerment—implemented via nine pillars including broadband highways, e-kranti, IT for jobs, and e-governance.
- **Achievements**: India ranks 3rd in digital economy, internet access rose 285%, leads global real-time payments (49% in 2023), and launched inclusivity measures like BHASHINI (30+ languages).
- **Challenges**: Low digital literacy (38% households), poor rural internet and outdated broadband norms, rising cyber risks (₹220 mn average breach cost in 2025), and gaps in healthcare digitization.
- **Way Forward:** Fast-track BharatNet, improve broadband quality, expand e-services, strengthen cybersecurity, and integrate digital literacy in curricula.

3.8. Intellectual Property Rights in India

Why in the News?

India's Intellectual Property (IP) filings rose by **44% in last 5 years**, led by a **380% surge in Geographical Indications**.

- **Global Position**: India granted 1,03,057 patents in FY24; ranked 4th in trademark filings (2023); and rose from 9th (2020) to 6th (2023) in global patent filings.
- **Reasons for Boom:** Simplified IP laws, modernization of offices, and adoption of Locarno classification, awareness schemes like SPRIHA, fee concessions, digital & AI initiatives.
- **IPR Overview:** Rights over creations of the mind; 8 types under IPRPM (patents, trademarks, designs, copyright, GIs, semiconductor layout, trade secrets, plant varieties). Administered by CGPDTM under DPIIT.
- **Significance:** Boosts FDI, startups, competitiveness, and women's participation.
- **Challenges:** Low R&D spend, patent disputes & evergreening, compulsory licensing issues, weak IP financing, lack of "patent pending" clarity, delays, and poor enforcement.
- **Way Forward:** Review National IPR Policy, strengthen states' role, set up IPR courts, create IP fund, and enhance global collaboration.

3.9. News in Shorts

3.9.1. Alternative Investment Fund

RBI capped investment by Regulated Entities at 20% of the corpus of an AIF scheme.

About Alternative Investment Fund (AIF)

- Privately pooled investment vehicles regulated by SEBI (2012) that collect funds from sophisticated investors, Indian or foreign, for defined investment policies.

Categories:

- **Category I:** Invest in start-ups, SMEs, infra, socially beneficial sectors (e.g., VC, angel funds).
- **Category II:** No leverage, only operational debt (e.g., PE, debt, real estate funds).
- **Category III:** Use leverage, incl. derivatives (e.g., hedge funds, PIPE).

3.9.2. Digital Payments Index (DPI)

Over 65,000 crore transactions worth ₹12,000 lakh crore in 6 years.

About Digital Payments Index (DPI)

- Published semi-annually by RBI to track digital adoption. Parameters: Enablers, Infrastructure (demand & supply), Performance, Consumer Centricity.

3.9.3. Financial Conditions Index (FCI)

A study of RBI has proposed the construction of a FCI for India.

About Financial Conditions Index (FCI)

- It measures relative tightness/ease of conditions since 2012 using 5 segments—money, G-sec, corporate bonds, forex, equity. Higher values mean tighter conditions.

3.9.4. Global Findex 2025

The World Bank report titled **'Global Findex 2025'** released.

India specific Highlights

⮕ Account ownership near 90%. About 16% inactive accounts (vs 4% in other LMIs). Inactive accounts among both genders declined (2021–24). Barriers: device cost, poor network.

3.9.5. Stablecoins

GENIUS Act has been enacted in the US to establish a **regulatory framework** for **stablecoins.**

⮕ Stablecoins are a type of **cryptocurrency** whose value is linked to that of another **currency**, **commodity**, or financial instrument. E.g., **Tether (USDT)**, is pegged to the US dollar.

Why has the use of Stablecoins increased?

⮕ Crypto linked to assets (currency/commodity); steadier value than volatile coins like Bitcoin.

Regulation of Cryptocurrency or Cyrpto Assets in India

⮕ Crypto assets unregulated but taxed (30% on **Virtual Digital Assets** (VDAs), Finance Act 2022). VDAs include crypto, NFTs; in 2023, brought under PMLA for anti–money laundering oversight.

3.9.6. CROPIC

This initiative is part of digital innovations in agriculture for fostering financial resilience.

About CROPIC (Collection of Real Time Observations & Photo of Crops) initiative

⮕ Mobile app launched by **The Ministry of Agriculture** under **Pradhan Mantri Fasal Bima Yojana (PMFBY)** to capture geotagged crop photos during crop cycles.

⮕ Uses AI-cloud platform for analysis and a dashboard for visualisation. Funded through Fund for Innovation and Technology under PMFBY to boost financial resilience in agriculture.

3.9.7. Agricultural Outlook 2025–2034 Released By Oecd-Fao

⮕ **Released By: OECD and FAO**.
⮕ Provides a comprehensive assessment of the ten-year prospects for agricultural commodities, markets at national, regional, and global levels.
⮕ **Global Market Trends (2024) according to the report**
  ➡ **Biofuels**: **Growth projection at 0.9% annually,** led by India, Brazil and Indonesia.
  ➡ **Cotton**: **India** is set to overtake China as the top producer.

3.9.8. Offshore Areas Atomic Minerals Operating Right Rules, 2025 Notified

Rules notified in accordance with provision of **Offshore Areas Mineral (Development and Regulation) Act, 2002.**

About the Rules

⮕ Rules regulate exploration and mining of atomic minerals (uranium, thorium) in offshore areas, applicable only above set concentration levels. Govt-nominated entities can get licences or leases, while foreign players need prior approval.

⮕ **Uranium**
  ➡ **Key Reserves: Jharkhand**, **Andhra Pradesh**, **Meghalaya, Rajasthan,** etc.
  ➡ Most of uranium deposits in India small and of far lower grade.

⮕ **Thorium**
  ➡ India has limited resource of uranium but large resource of thorium. Monazite contains **8 – 10% thorium.**
  ➡ The beach sands of **Kerala** and **Orissa** have rich reserves of monazite.

3.9.9. Global Capability Centre (GCC)

The Finance Minister urged industry & government to work together to boost the setup of GCC.

About GCCs

⮕ Also known as Global In-house Centres (GICs), GCCs are offshore units of global firms providing IT, R&D, and customer support within the parent company's structure.
⮕ **Status in India**: India hosts over 1,800 GCCs (50% of global share). They contribute $68 billion GVA.
⮕ **Challenges:** Skilled workforce shortages (Tier II–III cities), infrastructure gaps, etc.

3.9.10. DoT Releases Draft National Telecom Policy (NTP)-2025

NTP-2025 seeks to build on progress made under **National Digital Communications Policy 2018**.

⮕ It addresses emerging challenges by next-generation technologies such as **5G/6G, Artificial Intelligence (AI).**

About NTP-2025

⮕ **Vision:** Transform India into a digitally empowered economy with universal, secure, and sustainable connectivity.
⮕ **Mission:**
  ➡ **Connectivity:** Expand networks, improve quality, ensure inclusion.
  ➡ **Innovation:** Promote R&D, startups, and academia-industry linkages.

➡ **Domestic Manufacturing:** Boost design-led growth, skills, and investment.

➡ **Security**: Build resilient, trusted telecom ecosystem.

➡ **Ease of Living/Business:** Simplify access and foster digital inclusion.

➡ **Sustainability:** Adopt green tech, renewable energy, and circular economy.

3.9.11. Aluminium and Copper

Central Government recently unveiled Aluminium and Copper Vision Documents.

About Vision Document

⮑ **Aluminium & Copper Vision Documents provide long-term strategies to meet rising domestic demand and ensure raw material security.**

⮑ **Copper Vision: Demand to rise sixfold by 2047; target of 5 MTPA smelting/refining capacity by 2030.**

⮑ **Aluminium Vision: Sixfold production rise by 2047; expand bauxite capacity to 150 MTPA.**

⮑ **Distribution**

➡ **Aluminium/Bauxite:** India's reserves mainly in Odisha (41%), Chhattisgarh, Andhra; Odisha leads production (73%). Globally, China (58%) is top producer, followed by Australia, Brazil, India.

➡ **Copper:** India's reserves—Rajasthan (52%), MP, Jharkhand; production led by MP (57%), Rajasthan (43%). Globally, Chile (19% reserves) leads, followed by Peru and Australia.
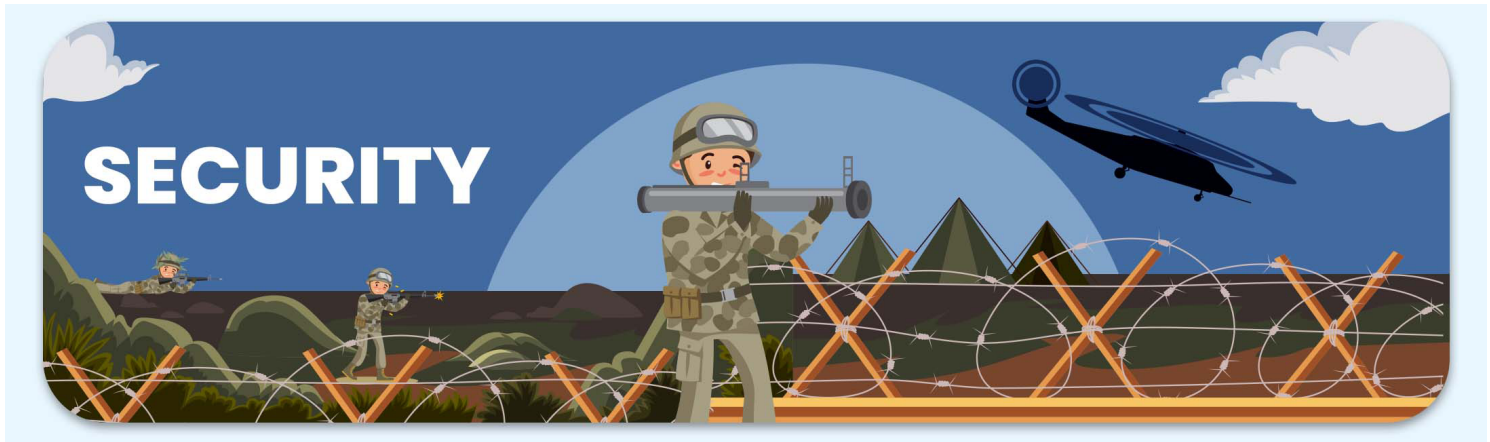
4.1. Quantum Cyber Readiness

Why in the News?

MeitY, CERT-In and SISA released a whitepaper **"Transitioning to Quantum Cyber Readiness"**.

Quantum Cyber Threats

- **Harvest Now, Decrypt Later (HNDL) Attacks**: Encrypted data harvested now, decrypted later using quantum power.
- **Secure Channel Decryption**: Quantum computers may break defence or sensitive communications.
- **Signature Impersonation**: Forged certificates enabling malware, phishing.
- **Zero-Day Risks**: Unknown algorithms breaking current cryptography, delaying quantum-safe transition.

India's Quantum Cybersecurity Initiatives

- **National Quantum Mission (2023):** Aims for 2000 km quantum-secured communication.
- **DRDO:** Set up QTRC; achieved 1 km entanglement-based secure link.
- **C-DOT:** Developing Quantum Key Distribution (QKD), Post-Quantum Cryptography (PQC).
- **ISRO:** Demonstrated free-space QKD over 300 m.

Way Forward: Recommended by Whitepaper

Area	Recommendations
Assessment & Strategic Planning	**Quantum Bill of Materials (QBOM):** Supports risk prioritization, procurement, upgrades, and compliance for post-quantum readiness. AI Risk Assessment: Uses machine learning for cryptographic pattern detection.
Technology Readiness	**PQC Testing:** Validate implementations before deployment. **Hybrid Cryptography**: Combine classical and quantum-resistant algorithms.
Phased Organizational Rollout	Embed PQC in workflows for secure development, key management, and signing. Update ICT policies to mandate approved algorithms, toolsets, and enforce standards.
Resilience, Monitoring & Futureproofing	QKD: Physics-based security using quantum mechanics. ML-DSA and SLH-DSA: Stronger signatures for government, finance, legal documents despite higher computational demands.

4.2. News in Shorts

4.2.1 Operation Mahadev

About Operation Mahadev

➲ A **joint counter terror mission** of Indian Army, CRPF & J&K Police to eliminate foreign terrorist's infiltration.

4.2.2. Operation- MED MAX

About Operation-Med Max

➲ Narcotics Control Bureau (NCB) operation to crack down on illegal pharma trade.

➲ Dismantled syndicate spanning four continents which used encrypted platforms, drop shipping, cryptocurrency. It highlights nexus of tech and illicit trade.

4.2.3. Project 17A

INS Udaygiri, second ship of Project 17A's delivered to Indian Navy.

Project 17A

➲ The Project is follow-on of the Shivalik class (Project 17) frigates active in service.
  → **Frigate is a multi-role vessel** for ship protection against surface combatants or incoming aerial threats.

➲ **P-17A ships** have enhanced **stealth features** and fitted with '**State of the Art' weapons** and **sensors.**

4.2.4. Extended Range Anti-Submarine Rocket

India has tested the indigenous anti-submarine rocket systems.

About ERASR

➲ ERASR is a totally **indigenous anti-submarine rocket** used to **combat submarines and fired from onboard** of Indian Naval Ships.

➲ It has **twin-rocket motor configuration and** uses an indigenously developed **Electronic Time Fuze.**

4.2.5. Astra Missile

DRDO & Indian Air Force (IAF) successfully conducted the flight test of **'Astra'.**

About Astra Missile

➲ It is Indigenous **Beyond Visual Range Air-to-Air missile (BVRAAM) with range exceeding 100 kms.**

➲ The missile is designed **to engage and destroy highly manoeuvring supersonic aircraft.**

➲ The missile has **all weather day and night capability.**

4.2.6. Pralay missile

DRDO conducted flight tests of the Pralay missile.

About Pralay missile

➲ A **surface-to-surface short range solid propellant quasi-ballistic missile** which can fly at **hypersonic speed (Above Mach 5) with range** from 150 to 500 km.
  → Quasi ballistic missiles are a class of missiles that have low trajectory and take ballistic trajectory but **can change course and make maneuvers during the flight if required.**

4.2.7. Exercises in News

Exercise Bold Kurukshetra	➲ **14th Edition** of **India–Singapore** Joint Military Exercise.
Bharat NCX	➲ National Cybersecurity Exercise. ➲ Conducted by **National Security Council Secretariat (NSCS)** in collaboration with **Rashtriya Raksha University (RRU), Gandhinagar, Gujarat.**
SIMBEX Exercise	➲ **Genesis:** It began as **Exercise Lion King in 1994.** ➲ It is an **annual exercise** held between the **Indian Navy** and the **Republic of Singapore Navy.**
Talisman Sabre Exercise	➲ 2025 exercise commences in Sydney involving **19 nations** across land, sea, air, space, and cyberspace. ➲ **Major Participants:** France, Germany, **India,** etc.
Jaa Mata	➲ It is a **joint sea exercise** between **Japan** and **India Coast Guard.**

ENVIRONMENT
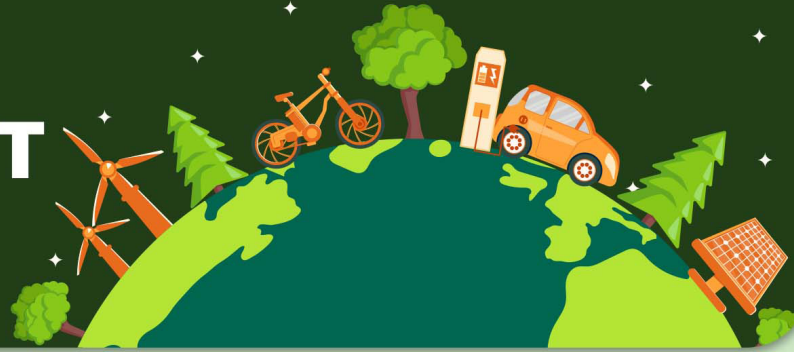
5.1. Urban Resilience

Why in the News?

The World Bank report **"Towards Resilient and Prosperous Cities in India"** highlights **challenges from rapid urbanization and climate change.**

More on the News:

➲ India's urban population is projected to rise from 480 million (2020) to **1.1 billion (2070),** with cities expected to generate over **70% of new jobs by 2030.**

What is Urban Resilience?

➲ Refers to capacity to withstand disasters, adapt to change, and transform for future sustainability.

Key Observations of Report regarding Vulnerable Indian Cities

➲ **Urban Flooding:** Storm water flooding risk may rise 3.6 to 7 times by 2070, with **losses reaching $5 billion by 2030.**
➲ **Coastal Flooding:** 40% population lives near coasts; damages projected to rise **from $2.4 billion (2010) to $75 billion (2050).**
➲ **Urban Heat Island (UHI):** Exacerbates heat stress, cities 3 - 4°C hotter; Chennai may lose 3.2% GDP by 2050.
➲ **UHI Effect:** Altered thermodynamic, aerodynamic properties of the cities tend to trap more heat, making cities warmer than their rural and suburban counterparts.
➲ **Cascading Infrastructure Failure:** Floods trigger road closures, electricity outages, and economic losses, paralyzing urban areas.

Challenges in building Urban Disaster Resilience

➲ **Fragmented Governance:** Multiple agencies split responsibilities, weakening coordination.
➲ **Lack of Master Plans:** 52% cities lack plans; shortage of urban planners in ULBs.
➲ **Limited Finance:** Municipal revenue ~1% of GDP is insufficient.
➲ **Poor Infrastructure:** Drainage, sewerage systems are inadequate.
➲ **Private Sector Role:** Contributes only 5% to urban infrastructure financing.

Government Initiatives Related to Urban Resilience

➲ **Government Schemes:** Swachh Bharat Mission, Smart Cities, etc.
➲ **Climate Smart Cities Assessment Framework:** Indicators like urban planning, green cover, etc.
➲ **C-FLOOD:** Provides 2-day advance flood forecasts.
➲ **Urban Mobility:** RRTS, promotion of walkable streets in cities, etc.
➲ **Coalition for Disaster Resilient Infrastructure (CDRI):** To promote infrastructure resilience.

Recommendations by Report

➲ **Flood & Heat Resilience: City-level climate-action plans** for sustainable development.

- **74th Amendment**: Transfer urban planning to elected local bodies with funding strategies.
- **Municipal Finance: $2.4 trillion investment needed** by 2050 to build climate-resilient infrastructure.
- **Governance Reform:** Clarify authority roles; adopt technology for efficient service delivery.
- **Global Commitments**: Align with **SDG-11**, **Habitat III agenda** on resilient, inclusive cities.
- **Inclusive Development: Strengthen Tier 2/3 cities**, satellite towns, **circular economy**, mixed-use, **Transit Oriented Development** etc.

Conclusion

"Let's consider urbanization as an opportunity. Gone are the days when it was seen as a challenge or obstacle, Cities are not only growth centers. Our cities have strength & capacity to mitigate poverty." – PM. Modi.

5.2. Ethanol Blending

Why in the News?

India has **achieved 20% Ethanol blending target** in petrol.

More on the News

- Target envisaged in **Ethanol Blended Petrol (EBP) Programme.**
- It **increased from 1.5% (2014) to 20% (2025).**

About Ethanol

Ethanol (C2H5OH), renewable fuel, is produced from crops via **fermentation** or **petrochemical processes.**

- **Types:**
    - **1st Generation:** From food crops (cereals, sugarcane, beet etc).
    - **2nd Generation**: From residues/woody biomass.
    - **3rd Generation**: From algae.
    - **4th Generation**: From engineered plants and microorganisms.

About Ethanol Blended Petrol (EBP) Programme

- **Genesis:** Launched in 2003 to promote blending of ethanol in petrol.
- **About Ethanol Blending**
    - Ethanol blending **mixes ethanol with petrol** for cleaner fuel.
    - **Types**: E10 (10% Ethanol by Volume), E20, E85 fuel.
        - E-20 improves ride quality, lowered carbon emissions by 30% as compared to E10 fuel.
- **Target: National Policy on Biofuels** (2018, amended 2022), advanced the target of 20% blending target to 2025-26.
    - **Sources: Sugarcane Juice, Sugar Beet, Cassava**, damaged/ rotten grains, **surplus food grains**.
        - **Achievement:** Ethanol production increased from 38 crore liters (2014) to 660 crore liters (2025).

Significance of Ethanol Blending

| Energy Security - Secure energy & growth | Environmental Sustainability - 698 Lakh tonnes CO$_2$ reduced | Economic Growth - Boosts biofuel industry | Crop Diversification - Maize & alternatives | Import Savings - ₹21.36 Lakh Cr. saved | Rural Development - ₹1.18 Lakh Cr. to farmers |

Challenges of Ethanol Blending in India

- **Food Security and Inflation**: **FAO (2023)** warns biofuel expansion may worsen food insecurity; crop diversion for ethanol raises risks.
- **Environment:** Heavy reliance on water-intensive sugarcane stresses aquifers.

- **Technology & Cost:** Transition to E20 needs costly engine/fuel system changes; **older vehicles lack ethanol-compatible parts**.
- **Fuel Efficiency: Ethanol's lower energy density reduces mileage**; older engines face drivability/emission issues; risk of clogging due to water absorption.
- **Supply:** Challenges include **poor availability in NE states**, inter-state restrictions, high logistics cost/emissions, and inadequate storage infrastructure.

Initiatives facilitating Ethanol Blending

- **PM JIVAN**: Supports 2G ethanol projects.
- **EISS:** Promotes dedicated ethanol plants.
- **GST cut:** Ethanol for EBP at 5%, crude at 18%.
- **Amendment to Industries (Development & Regulation) Act, 1951** for smooth ethanol movement.

Conclusion

India's ethanol blending ensures energy security, sustainability, and growth; phased biodiesel rollout needed to address emerging challenges.

5.3. CSS-Integrated Development of Wildlife Habitats Scheme (CSS-IDWH)

Why in the News?

Gharial and Sloth Bear recommended for inclusion under Species Recovery Programme of CSS-IDWH.

About CSS-IDWH Scheme

- **Nodal Ministry:** Ministry of Environment, Forest and Climate Change
- **Type:** Centrally Sponsored Scheme
- **Purpose:** Conducting wildlife protection and conservation activities.
- **Financial Assistance:** To State/UT Governments for
  - **Supporting Protected Areas**
  - **Wildlife outside protected areas**
  - **Recovery programmes** for saving critically endangered species (22) and habitats like Snow Leopard, Asiatic Lion, Great Indian Bustard, Gangetic River Dolphin, etc.

About the Animals

Gharial	Sloth Bear
Habitat: Prefers deep fast flowing rivers. **Range: Nepal** (Rapti–Narayani) and **India** (Girwa, Son, Ramganga, Gandak, Chambal, Mahanadi). **Features:** Fish catching teeth**,** elongated snout, males with GHARA, only sexually dimorphic crocodilian. **Threats**: Habitat degradation and getting trapped and drowning in fishing nets. **Status** **IUCN:** Critically Endangered **CITES:** Appendix I **WPA, 1972:** Schedule I **Conservation Efforts**: Project Crocodile (1975), Breeding Program and National Gharial Plan **Gharial** 	**Habitat:** Forests and grasslands. **Range: India, Nepal, and Sri Lanka**. **Features:** Long claws, shaggy coat, long snout, termite eater, nocturnal and aggressive**.** **Threats**: **Habitat loss** **Status** **IUCN**: Vulnerable **CITES**: Appendix I **WPA, 1972**: Schedule I **Conservation Efforts: Daroji Sloth Bear Sanctuary** (Karnataka). **Sloth Bear**

5.4. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Why in the News?

CITES is celebrating 50th anniversary.

About CITES

- **Genesis:** Conceived in **1963 at IUCN meeting**; **in force since 1975**
- **Aim:** Voluntary pact ensuring trade in wild species doesn't threaten survival; regulates trade via licensing.
- **Secretariat:** Administered by **UNEP** at **Geneva**; IUCN provides technical support.
- **Parties:** 185 parties, India ratified in 1976, implemented via national laws.
- **CoP:** Apex decision body; CoP3 held in New Delhi (1981).
- **CITES Trade Database:** Managed by **UNEP-WCMC** for trade monitoring on behalf of CITES Secretariat.

CITES Appendices
(Lists Species in 3 Appendices based on their degree of protection)

Appendix I: Species **threatened with extinction**, trade permitted in only exceptional cases.

Appendix II: Species **not necessarily** threatened with extinction, but trade must be controlled.

Appendix III: Species **protected** in at **least one country**, which has asked other CITES Parties for assistance in controlling the trade.

Key Initiatives of CITES

- **Protects 40,000 + species via Appendices.**
- **MIKE Programme** monitors elephant poaching.
  - → E.g. of MIKE sites- Chirang-Ripu Elephant Reserve; Dihing Patkai Elephant Reserve.
- **Strategic Vision 2021–2030:** Aligns with biodiversity, SDGs.
- **CITES Tree Species Programme (CTSP)**: Promotes sustainable tree trade.
- **International Consortium on Combating Wildlife Crime (ICCWC), 2010**: Combats wildlife crime globally.

Conclusion

CITES safeguards biodiversity through evolving strategies, MIKE, ICCWC, and member-driven legal frameworks.
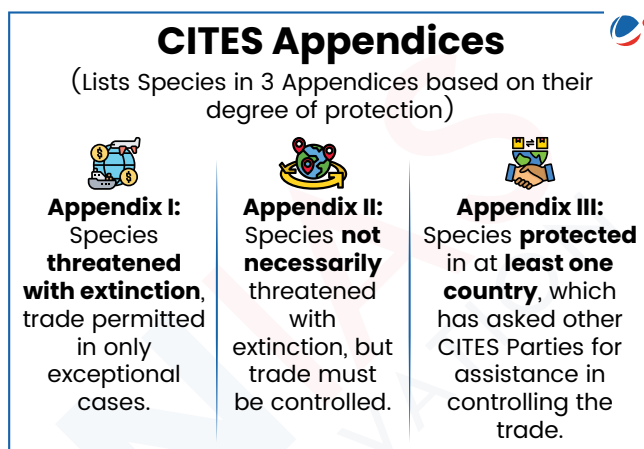
5.5. Pacific Ring of Fire

Why in the News?

8.8 magnitude earthquake near Russia's Kamchatka Peninsula, seismically active Pacific Ring of Fire triggering tsunami waves.

More on News

- Quake caused by **shallow reverse faulting,** occurs near the Earth's surface when Earth's crust is pushed up over another due to **compressional forces.**

Reverse Fault

Fault scarp

Normal fault　　Extension　　Reverse fault　　Compression
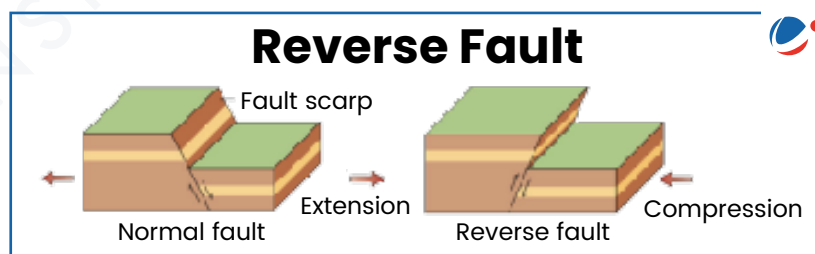
About Pacific Ring of Fire

- **Horseshoe-shaped belt** of intense seismic - volcanic belt encircling the Pacific Ocean basin.
- **Accounts:** ~75% of active volcanoes**,** ~90% of earthquakes.
- **Location:** Traces boundaries of Pacific, Cocos, Nazca, Philippine, etc.

Features of Circum-Pacific Belt

- **Geography:** Led to formation of mountains, island arcs, deep underwater trenches (Mariana Trench).
- **Source of geothermal energy:** More than 40%.
- **Rich in Minerals.**
- **Agricultural Significance:** Volcanic soils are fertile (good for crops like rice, coffee).

Cause of Frequent Earthquakes and Volcanism

➲ **Subduction zones:** Plates overlap at convergent boundaries; subducted rock forms magma, driving volcanism. E.g. Taupo Arc, NZ.

➲ **Transform Faults:** Plates slide laterally (San Andreas), causing quakes with little volcanism.

➲ **Divergent Boundaries:** Plates pull apart, forming seafloor spreading/rifts. E.g. East Pacific Rise.

➲ **Hot Spots:** Mantle heat melts rock, creating volcanoes.

Conclusion

Ring of Fire drives major quakes, eruptions, shaping Pacific ecosystems.

PACIFIC RING OF FIRE

5.6. News in Shorts

5.6.1. Sustainable Development Goals Report 2025

SDGR monitors **global progress on the 2030 Agenda for Sustainable Development.**

Key highlights of the Report

Goal 1	8.9% in extreme poverty.
Goal 2	1 in 11 faced hunger.
Goal 4	110 million more in school, 272 million still out.
Goal 5	Women occupy less than a third in management.
Goal 8	Unemployment 5.0%, 58% informal work.
Goal 10	57% working-age employed.
Goal 11	3 billion with housing, 1.12 billion in slums.
Goal 13	2024 hottest year.
Goal 16	50,000 conflict deaths, 123.2 million displaced.

5.6.2. National Indicator Framework (NIF) Progress Report 2025

NIF by MoSPI for monitoring SDGs at the national level.

Key Progress Highlighted

SDG 2	**Agriculture income** increased.
SDG 6	**Rural safe water access** increased.

SDG 7	**Renewable energy** increased, capacity increased from 64.04 to **156.31** watts per capita.
SDG 8	**Social protection** expanded 22% to **64.3%.**
SDG 9	**GDP emission reduced by 36%.**
SDG 10	**Gini coefficient** of household expenditure decreased.
SDG 12	**Waste processed** increased from 17.97% to 80.7%.
SDG 15	**Forest cover** rose from 21.34% (2015) to 21.76% (2023).

5.6.3. Draft Rules For Carbon Credit Trading Scheme Issued

MoEFCC Issued Draft **Greenhouse Gas (GHG) Emission Intensity Target Rules, 2025** under Carbon Credit Trading Scheme (CCTS).

About Draft Rules

➲ **Defines GHG emission intensity (GEI)** (CO_2e per unit output) and sets binding targets for 400+ industrial units.

➲ **BEE** determine **targets**.

➲ **Sectors**: Aluminum, iron and steel, petroleum refining, petrochemicals, and textiles.

➲ Non-compliance attracts **penalties under Environment (Protection) Act, 1986.**

About CCTS

- ➲ Promotes carbon pricing.
- ➲ ECA 2022 **empowers government to specify scheme.**
- ➲ **Mechanisms:** Compliance (carbon credits for low emitters) and voluntary offset projects**.**
- ➲ **Administrator:** BEE
- ➲ **Regulator of Carbon Trading:** CERC
- ➲ **Significance:** Supports **Indian Carbon Market**, aligns with **UNFCCC and Paris Agreement.**

World Bank's **"State and Trends of Carbon Pricing 2025"** report has recognized India's role **in shaping global climate finance and carbon pricing frameworks.**

5.6.4. New Rules For Contaminated Site Management Notified

MoEFCC notified **Environment Protection (Management of Contaminated Sites) Rules, 2025** under the Environment (Protection) Act, 1986.

Key highlights of the Rules

- ➲ **Aim**: Ensure responsible parties remediate polluted sites harming soil, water, health, and environment.
- ➲ **Coverage:** 189 hazardous substances; excludes radioactive waste, mining, marine oil spills, solid waste.
- ➲ **Response Levels:** vary by agricultural, residential, commercial, industrial areas.
- ➲ **Management:** Local bodies report sites; SPCBs assess, identify polluters, and approve clean-up plans; new owners liable if land sold.
- ➲ **Funding:** Central/State Governments cover initial costs; polluter reimburses within 3 months.
- ➲ **Penalties** for non-compliance; voluntary remediation allowed, filling legal vacuum for legacy pollution.

5.6.5. Global Wetland Outlook 2025 Released

Released by Secretariat of the Ramsar Convention.

Key Highlights

- ➲ **Coverage:** Inland, coastal, marine wetlands span 1,800 million hectares; 22% lost since 1970.
- ➲ LICs/LMICs, especially Africa, **report most degradation.**
- ➲ **Ramsar goals align** with **Kunming-Montreal Global Biodiversity Framework.**
- ➲ **Threats:** Urbanisation, industrial and infrastructure development.
- ➲ **Best Practices:** Asia's **Regional Flyway Initiative** restores 140+ wetlands; **Seychelles** issues first **blue bond**.
- ➲ **Way Forward:** Integrate wetlands in national planning, natural capital accounting, and innovative finance like green/blue bonds.

5.6.6. Uttarakhand To Assess 'Tourist Carrying Capacity' In Nainital District

The survey seeks a **long-term strategy** to protect Nainital's hill towns **from unregulated tourism, vehicular traffic, and population pressure.**

- ➲ **NGT (Sept 2024)** directed classifying Nainital **based on carrying capacity and environmental sensitivity.**
- ➲ **Carrying Capacity: Maximum population an area** can sustain considering **biotic** (vegetation, hydrology) and **abiotic** (terrain, climate) factors.
- ➲ **Assessment Approaches: Planetary boundaries** (environmental crises) and **Biocapacity Overshoot** (Earth Overshoot Day).
- ➲ **Significance:** Guides sustainable development by **balancing economic growth with ecological limits**.

Proactive regulation and adaptive planning enable sustainable tourism, prevent irreversible damage, and offer governance templates for fragile regions.

> ## Precautionary Principle for assessment of Carrying Capacity
>
> - Taking **Preventive actions** in face of uncertainty
> - **Shifting burden** of proof on **proponents** of the activity
> - Exploring **alternatives** to potential harmful actions
> - Increasing public participation in **decision-making**

5.6.7. ICJ Delivers Decision On Tackling Climate Change

Case on **global responsibilities toward climate action**, to **protect vulnerable SIDS led by Pacific Island nation of Vanuatu** and supported by +130 countries.

- ➲ **UN General Assembly (2023)** sought ICJ **advisory on states' environmental obligations** and **legal consequences.**

Key Highlights

- ➲ **Clean, Healthy, and Sustainable Environment is Human Right**
- ➲ **States Obliged to Limit Emissions**
- ➲ **Consequences for Non-Compliance: Incur legal responsibility** and **may be required to offer guarantees** of non-repetition.

Some countries oppose mandated cuts, but ICJ opinion increases legal pressure for climate accountability.

International Court of Justice (ICJ)

HQ Peace Palace, Hague, Netherlands

🧪 **Established:** 1945 as UN's main judicial body.

🎯 **Functions:** Settles disputes between states and gives advisory opinions to authorised UN organs.

⚙️ **Limitation:** Hears cases only when requested by states.

🔗 **Composition:** 15 independent judges, elected for 9 years by UNGA & UNSC.

••• **Relevance:** World Court for resolving disputes among 193 UN member states.

5.6.8. ADEETIE Scheme Launched

About ADEETIE

➲ **Eligibility:** MSMEs with **Udyam ID** showing ≥10% energy savings.

➲ **Implementation:** BEE.

➲ **Duration**: 3 years (FY 2025-28).

➲ **Target Sectors: 14 energy-intensive** sectors.

➲ **Implementation Approach:** Phased roll-out.

➲ **Components:** Interest subvention (3–5%), technical support, energy audits, project reports, and financial incentives.

Bureau of Energy Efficiency (BEE)

🪴 **Legislative Framework:** Energy Conservation Act 2001

🌱 **Objective:** Reduce energy intensity of Indian economy

🪂 **Other Initiatives:** BEE-SME Program for energy efficiency, National Programme on Energy Efficiency and Technology Upgradation, SIDHIEE portal

5.6.9. Changing Nature Of Floods

IIT Delhi & Roorkee study shows **changing riverine flood patterns** (1970–2010) across 170+ stations.

Key highlights of the Study

➲ **Decline in Magnitude: 74% stations** show reduced floods; notable in **West/Central Ganga** (17%/decade), **Narmada, Marathwada**.

➲ **Rise in Pre-Monsoon Flood Intensity: Malabar Coast.**

➲ **Shift in Flood Timing:** Upper Ganga (delayed), Central India (earlier), Southern India (later).

5.6.10. C-Flood, A Unified Inundation Forecasting System Inaugurated
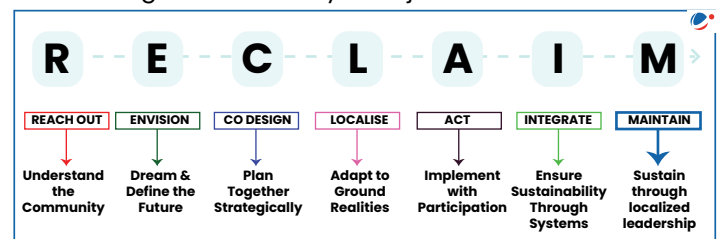
C-FLOOD: **Unified web-based platform** offering **2-day flood forecasts and inundation maps** up to **village-level** for disaster management.

➲ **Covers:** 40 mha (~12%) flood-prone area; **currently Mahanadi, Godavari, Tapi basins.**

➲ **Uses:** 2-D hydrodynamic modelling; integrated with NDEM portal.

➲ **Developed by:** C-DAC, CWC, DoWR, NRSC.

➲ **Execution:** Under the **NSM (2015)** with the aim to empower India in supercomputing capabilities, by **MeitY & DST.**

➲ Planned expansion to all Indian river basins; aids preparedness with water level predictions and decision-support for authorities.

➲ Forecasts to be integrated with the **National Disaster Management Emergency Response Portal (NDEM)**.

5.6.11. Reclaim Framework

RECLAIM Framework: Launched by **Coal Ministry** for inclusive community engagement during mine closure and repurposing.

➲ **Developed by:** Coal Controller Organisation with Heartfulness Institute.

➲ **Focus:** Mitigate impacts on landscapes and livelihoods, ensure gender inclusivity, support vulnerable groups, and align with Panchayati Raj Institutions.

R	E	C	L	A	I	M
REACH OUT	ENVISION	CO DESIGN	LOCALISE	ACT	INTEGRATE	MAINTAIN
Understand the Community	Dream & Define the Future	Plan Together Strategically	Adapt to Ground Realities	Implement with Participation	Ensure Sustainability Through Systems	Sustain through localized leadership

5.6.12. Weather Derivatives

India to launch first **weather derivatives** via NCDEX−IMD partnership, **using rainfall-based products.**

➲ **Aims:** Help farmers hedge against irregular rainfall, heatwaves, and unseasonal weather.

➲ Contracts **use historical and real-time IMD data; location-specific and seasonally structured**.

➲ **About weather derivatives:** Unlike financial derivatives, they are **based on meteorological parameters** and a **weather index; globally traded since 1990s**, marking India's first major step.

5.6.13. Human-Made Dams Have Shifted Earth's Poles

Dam construction has shifted Earth's rotational axis by over 1 meter since 1835, driving **True Polar Wander (TPW).**

- ➲ **TPW:** Rotation of Earth's solid crust/mantle around liquid core **to maintain rotational balance**, traditionally driven by glacial melt, tectonics, and ocean shifts.
- ➲ **Dams' Role: Reservoirs redistribute mass inland**, **altering rotation**; effects vary with dam size and location.
- ➲ **Impacts: Affects satellite navigation**, space telescopes, and slightly **lengthens Earth's days.**

True Polar Wander

New poles relative to planet

Same spin axis relative to sun
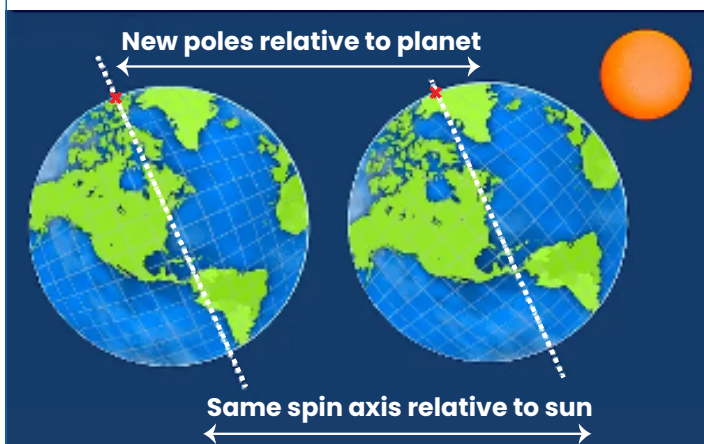
5.6.14. Winter Fog Experiment (WiFEX)

WiFEX completes 10 years dedicated research into North India's dense winter fog.

About WiFEX

- ➲ **World's long-term open-field experiments** focused on fog.
- ➲ **Institutions: Indian Institute of Tropical Meteorology** under Ministry of Earth Sciences (MoES).
- ➲ **Objective:** To develop better now-casting (next 6 hours) and forecasting of winter fog.

5.6.15. Kariyachalli Island

Uninhabited island has sunk significantly due to rapid erosion and rising sea levels.

About Kariyachalli Island

- ➲ **Location:** Between Rameshwaram and Thhothukudi in the **Gulf of Mannar Marine National Park region, Tamil Nadu.**
- ➲ **Tamil Nadu Sustainably Harnessing Ocean Resources (TNSHORE) project** will try to restore the reefs around island with **artificial modules, planting seagrass beds and reviving marine life.**

5.6.16. Chenab River

Forest advisory committee granted **'in-principle' approval for diversion of forest land** for construction of **Sawalkot HEP on Chenab River**.

- ➲ Sawalkot HEP (one of six strategic hydropower)
- ➲ **Aim: Optimizing use of Indus waters.**

About Chenab River

- ➲ **Origin: Bara Lacha Pas.**
  - ➜ **Two streams: Chandra and Bhaga** join to form Chenab.
- ➲ Chenab valley is **structural trough formed by great Himalayan and Pir Panjal ranges.**
- ➲ **Tributaries:** Miyar Nalla, Sohal, Thirot, Bhut Nalla, Marusudar and Lidrari.
- ➲ Vedic period known as **Chandrabhaga, Ashkini or Iskmati.**

5.6.17. Tokara Islands

More than 1,000 earthquakes rattled Tokara Islands in southern Japan.

- ➲ Japan is **one of the world's most seismically active countries**, sitting on top of four major tectonic plates along western edge of the Pacific "ring of fire".

About Tokara Island

- ➲ **Archipelago** in Japan, south of Kyushu and north of Amami Islands.
- ➲ **Toshima** (Japan's longest village) located here.

5.6.18. Bitra Island

Lakshadweep administration is considering acquisition of Bitra for defence purposes.

About Bitra Island

- ➲ **Smallest inhabited island** in territory of Lakshadweep having land area of **0.105 sq km.**
- ➲ **Location:** Near the Agatti Island, Arabian Sea.
- ➲ **Climate:** Categorised as 'Aw' i.e., tropical savannah.
  - ➜ Average rainfall: **~1600 mm a year.**

About Lakshadweep

- ➲ **India's smallest** Union Territory.
- ➲ **Consists: 36 coral islands, located in the Arabian Sea**.
- ➲ Atoll, lagoon and reefs are the three main geographical features.

SOCIAL ISSUES

6.1. 5 Years of National Education Policy (NEP)

Why in the News?

NEP completed **5 years.**

About NEP 2020

- India's third education policy (post-1968, 1986), **based on Kasturirangan Committee recommendations.**
- **Principles:** Focus on conceptual understanding, technology integration, light yet robust regulation, diversity, equity, inclusion, research, and continuous progress review.

Key Targets of NEP 2020

Universal **FLN** in primary school by 2025.	**100% GER** in **preschool to secondary** level by 2030.	**6% Public Investment** in Education (% of GDP)	**50% GER in higher education** including vocational education by 2035.	All **higher education institutions (HEIs)** to become multidisciplinary institutions, **by 2040.**	**At least 50% of learners** through school and higher education to have exposure to **vocational education** by 2025.

Key Achievements

- **School Education:**
  - ➤ Primary **GER nearly universal** at 93%.
  - ➤ Dropout rates declined (primary 1.9%, upper primary 5.2%, secondary 14.1%).
  - ➤ **Digitalization:** Schools with computers rose from 38.5% to 57.2%, internet access from 22.3% to 53.9%.
- **Higher Education**
  - ➤ **GER increased** from 23.7% to 28.4%
  - ➤ **HEIs** grew 13.8%.
- **Rural Schools**
  - ➤ FLN directives reached 80% of 15,728 schools.
  - ➤ **Enrolment** 95% among 6–14 years.
  - ➤ 15–16-year-old non-enrolment dropped from 13.1% to 7.9%.

Key Government Schemes/Initiatives

PM SHRI: Revamping **14,500 schools (2022-2027).**

NIPUN Bharat: FLN by Grade (2026-27).

ONOS: Nationwide **access to research journal.**

CwSN: PM e-Vidya (Sign Language); Screening-PRASHAST.

PRERNA: Residential experiential learning IX – XII.

ULLAS (NILP): Adult literacy for 15+ years.

Vidyanjali: School volunteer and CSR participation.

RVSK: R**eal-time** school performance data for **decision-making**.

- **Teacher Training: 12.97 lakh** trained under **NISHTHA.**
- **Innovation:** 92,168 patents filed, **HEIs contributing** 25%.
- **Inclusivity: 7.58 lakh girls** enrolled in residential schools.
- **International** campuses established.
- **Literacy:** Ladakh first fully literate unit.
- **Multilingualism:** Exams in 12 languages.
- **PARAKH** surveyed 21.15 lakh students.

Hurdles in Implementation

- **Funding:** Education expenditure **~3% of GDP vs target of 6%;** input-driven financing limits learning outcomes.
- **Centre-States divide:** Some states (e.g., Kerala, West Bengal) refused PM-SHRI MoUs requiring full NEP adoption.
- **Institutional Delays**: HECI formation and Teacher Education Curriculum pending.
- **Over-Regulation:** 50+ regulations under UGC/AICTE burden education and research.
- **Retention Rates**: Higher secondary retention only 45.6% (Economic Survey 2024-25).
- **Other issues: Teacher tech barriers**, opposition to **Three-Language Formula**, limited ECE learning time (35 min/day), and infrastructural/faculty gaps in Four-Year UG degree rollout.

Way forward for NEP 2020

- **Outcomes-based financing (OBF)**: Link funds to verified outcomes, not inputs.
- **Stronger coordination**: Shared **monitoring and local adaptation.**
- **Tech- enabled learning:** Use AI for teacher training and student tutoring.
- **Peer learning**: Initiatives like Mission Ankur for FLN skills.
- **Capacity Building:** Faculty development and leadership support.
- **Decentralization and Flexibility:** Allow institutions to adapt NEP, fostering innovation.

Conclusion

NEP 2020 has advanced inclusivity, quality, and digital access, but greater funding, governance, and infrastructure are vital for full success.

6.2. Rising Suicides Among Students

Why in the News?

SC in **Sukdeb Saha v. State of Andhra Pradesh** issued guidelines to protect students' mental health amid rising suicides.

Mental Health Crisis among Students

- **NCRB (2022)**: **7.6% suicides were students.**
- **Student suicides (2012-2022)**: Male **99%** and **Female 92%**.

Factors Behind Student's Mental Health Crisis

- **Academic Pressures:** Exam stress, dissatisfaction, failure.
- **Systemic Issues:** Ragging, bullying, harassment.
- **Culture of Silence:** Lack of open discussion, weak safeguards.
- **Regulatory Gaps**: No unified framework on student mental health.
- **Family Issues:** Conflict, neglect, financial stress, loss, addiction, mental illness.
- **Others:** Low self-esteem, isolation, caste/gender discrimination.

> ## Other SC Judgements
>
> **Amit Kumar v. Union of India (2025):** National Task Force on student mental health, suicide prevention in HEIs.
>
> **Shatrughan Chauhan v. Union of India (2014)** and **Navtej Singh Johar v. Union of India (2018):** Mental health integral to Right to Life (Article 21).

Initiatives to improve Students Mental Health

- ➲ **Mental Healthcare Act, 2017:** Ensures rights-based care; decriminalises suicide.
- ➲ **National Strategy for Suicide Prevention (2022):** Reduce suicides by 10% by 2030.
- ➲ **Tele MANAS:** Toll-free nationwide tele-mental health service.
- ➲ **Manodarpan:** MoE initiative for student-teacher mental wellbeing.
- ➲ **Malaviya Mission:** Faculty training for early intervention under NEP 2020.
- ➲ **Coaching Centers Guidelines**: Counsellor support, no batch segregation, records maintenance.

Way Forward: SC guidelines

- ➲ **Uniform Mental Health Policy: Annually reviewed and updated.**
- ➲ **Appoint Counsellor/Psychologist/Social Workers**: In institution with **100 or more students.**
- ➲ **Mandatory Training:** On mental health and first-aid.
- ➲ **Grievance Redressal Mechanism:** In all educational institutions.
- ➲ **Parental sensitization:** On academic pressure, empathy, and distress signs.
- ➲ **Extracurricular Activities:** To be prioritized.
- ➲ **Coaching Hubs:** Stronger protections, structured career counselling.
- ➲ **Residential Educational Institutions:** Ensure campuses free of bullying, drugs, harassment.

Conclusion

Student mental health needs holistic action: peer support, funding, accountability, safe digital use, stigma reduction, early intervention, and accessible care.

6.3. Social Isolation

Why in the News?

WHO report **"From Loneliness to Social Connection"** highlights health, well-being, and societal impacts of social isolation.

What is Social Connection and Disconnection?

- ➲ **Connection:** Interaction with family, friends, peers, colleagues, neighbours.
- ➲ **Disconnection:** Lack/poor quality of relationships.
  - → **Loneliness:** Gap between desired vs actual connections.
  - → **Social Isolation:** Few relationships/rare interactions.

Key Highlights of Report

- ➲ **Disconnection:** 1 in 6 feel lonely (2014–23); youth loneliest; 1 in 3 older adults, 1 in 4 teenagers isolated.
- ➲ **Disparities: 24% lonely in low-income** vs 11% in high-income countries.
- ➲ **Impacts:** 871k **deaths** (2014–19**), depression, dementia, poor academics, productivity loss**.
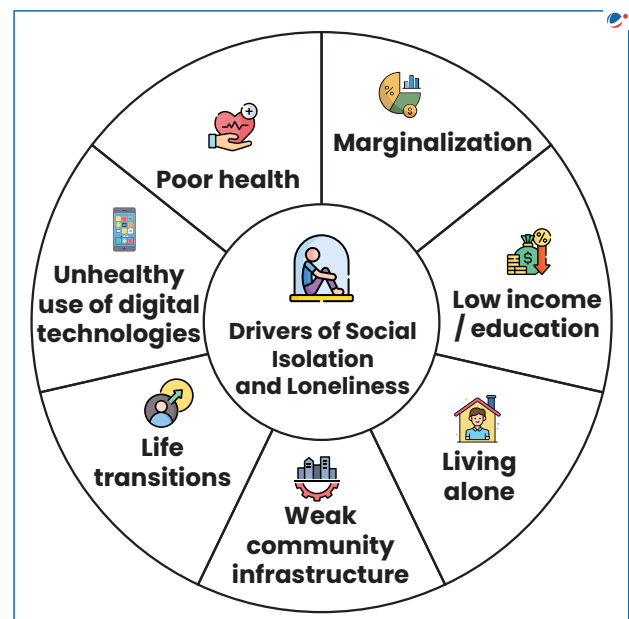
Roadmap for Improving Social Connection

- ➲ **Policy:** National strategies (e.g., Denmark, Finland, Germany).
- ➲ **Research:** Strengthen global/national capacity, launch challenges.
- ➲ **Interventions:** Accelerator, stronger community infrastructure.
- ➲ **Measurement:** Global Social Connection Index.
- ➲ **Engagement:** Campaigns, events, group activities and social prescribing.

6.4. News in Shorts

6.4.1. Role Of Social Organisations

Lok Sabha Speaker stressed the role of social organisations in national and societal development.

➲ Social organization: Structured groups through which individuals interact; formal (religious, educational, labour unions) or informal (family, peers).

Role of Social Organizations in Nation Building

Social Institutions	Role in Nation Building
Family	Transmits values, norms, moral behaviour; fosters harmony and inclusiveness.
Religious Institution	Provide moral framework, strengthen compassion, charity, social order, and community cohesion.
Educational institution	Impart knowledge/skills; instil discipline, teamwork; prepare individuals for responsibilities.
NGOs	**Policy Advocacy** (e.g. Mazdoor Kisan Shakti Sangathan & RTI). **Awareness & Capacity-Building** (e.g SEWA on gender issues). **Service delivery** (e.g Pratham in education). **Strengthening Democracy** (e.g. ADR against criminalisation of politics).

Social organisations shape values, culture, and governance, making them vital for building inclusive, sustainable, and resilient societies.

6.4.2. Child Adoption

CARA issued directions to States/UTs for strengthening counselling support at all stages of child adoption.

➲ **Legal Framework**: Directions under **JJ Act, 2015 (amended 2021)** and **Adoption Regulations, 2022**.

Key Directions to SARAs:

➲ **Strengthen psychosocial support** for PAPs, adopted children, and biological parents.
➲ **Designate/empanel qualified counsellors** at District & State levels.
➲ Provide psychosocial interventions when required by **Specialised Adoption Agencies (SAAs) or District Child Protection Units (DCPUs).**

Child adoption In India

➲ **Nodal Ministry:** Ministry of Women and Child Development.

➲ **Laws: Hindu Adoption and Maintenance Act of 1956** and **Juvenile Justice (Care and Protection of Children) Act, 2015.**
➲ **Central Agency**: CARA (under JJ Act) regulates domestic & intercountry adoptions.
➲ **International Framework**: Hague Convention (1993) ensures ethical, transparent adoptions, prevents trafficking.
➲ **State Role**: Implement JJ Act via SARAs, CWCs, and DCPUs.

Central Adoption Resource Authority (CARA)

Status
Statutory body under Ministry of Women and Child Development

Function
Monitors domestic and international adoptions

Role
Central Authority for inter-country adoptions under Hague Convention (1993), ratified by India in 2003

6.4.3. Kashi Declaration Adopted In Youth Spiritual Summit For Drug-Free India

Under Mera Yuva (MY) Bharat framework, the Youth Spiritual Summit launched a youth-led anti-drug campaign.

➲ **MY Bharat:** Autonomous body for youth development using technology.

Kashi Declaration

➲ 5 year **roadmap** for De-Addiction.
➲ **Treats substance abuse** as a public health & societal challenge.
➲ **Institutional mechanism:** Joint National Committee, annual reports, national support platform.
➲ **Integration** of spiritual, cultural, educational & technological efforts.

Other Anti-Drug Initiatives

➲ NDPS Act, 1985
➲ PITNDPS Act, 1988
➲ NAPDDR (2018-25)
➲ Nasha Mukt Bharat Abhiyaan, 2020

Drug-abuse in India (2019 Survey)

➲ **14.6% (age 10 and 75)** consume alcohol**.**
➲ **Cannabis and Opioids** next most common.

Driving factor behind Drug Abuse

- **Social Factors:** E.g., Peer pressure, family conflicts, and social isolation
- **Economic Factors:** E.g., Unemploym-ent and poverty
- **Psychological Factors:** E.g., Mental health issues like anxiety and depression
- **Academic/Work Stress:** E.g., High pressure in education and jobs increases risk, especially among youth.
- **Availabiliy:** India is located between Golden crescent and golden triangle.

6.4.4. Talash Initiative

NESTS, under the **Ministry of Tribal Affairs**, with **UNICEF India**, launched the TALASH initiative.

About TALASH

- National program supporting educational and personal development of students in Eklavya Model Residential Schools (EMRSs).
- **EMRS:** Residential schooling for tribal children in blocks with >50% ST population.
- **Digital platform which offers-**
  - **Psychometric Assessments:** Inspired by NCERT's **'Tamanna'** initiative
  - **Career Counselling**
  - **Life Skills & Self-Esteem Modules**
  - **E-Learning for Teachers**

6.4.5. State of Food Security And Nutrition In The World (SOFI) 2025 Report Released

Key findings of the report

- **Global hunger** dropped to 8.2% in 2024, but rises persist in Africa and Western Asia.
- **Moderate or severe food insecurity has declined** gradually since 2021.
- **Food prices** increased in 2023–24, raising the cost of a healthy diet; global population unable to afford it fell from 2.76 billion (2019) to 2.60 billion (2024).
- **Anemia in women** and **adult obesity** are rising.

SOFI 2025

About	Purpose
Joint initiative of FAO, IFAD, UNICEF, WFP and WHO	Annual global monitoring of SDG 2 targets 2.1 and 2.2 to end hunger, food insecurity and malnutrition

India specific

- **Excluding India**, **lower-middle-income countries** show increasing inability **to afford a healthy diet.**
- Kerala fishermen and wholesalers used mobile phones **to reduce price dispersion and waste.**

Recommendation

- **Targeted fiscal measures** and **social protection programs.**
- **Align fiscal and monetary policies** to stabilize markets.
- **Strengthen agricultural market information systems.**

ESSAY
ENRICHMENT PROGRAMME 2026

12 OCT, 2 PM

- Introducing different stages from developing an idea into completing an essay
- Practical and efficient approach to learn different parts of essay
- Regular practice and brainstorming sessions
- Inter disciplinary approaches
- **LIVE / ONLINE** Classes Available
- Available in English & हिन्दी

SCIENCE AND TECHNOLOGY

7.1. NISAR (NASA-Isro Synthetic Aperture Radar) Satellite

Why in the News?

NISAR satellite was successfully launched from Satish Dhawan Space Centre, Sriharikota.

About NISAR

- **Joint ISRO-NASA,** L & S-band **microwave imaging satellite**; fully **polarimetric and interferometric.**
- **NASA contribution:** L-band radar, GPS, telecom, antenna ($1.16B); **ISRO:** S-band radar, bus, GSLV-F16 ($90M).
- **Weight**: 2,392 kg
- **Orbit:** Sun-Synchronous Polar Orbit
- **Mission Life:** 5 years.

Objectives of NISAR Mission

| **Measure the woody biomass** and its changes | Track **changes in the extent of active crops** | Understand the **changes in wetlands' extent** | **Map Greenland's & Antarctica's ice sheets**, dynamics of sea ice and mountain glaciers | Characterize **land surface deformation** related to seismicity, volcanism, landslides, and subsidence & uplift associated with changes in subsurface aquifers, hydrocarbon reservoirs, etc. |

Technical Features

- **SweepSAR** for high-resolution wide-swath imaging **every 12 days.**
- **Dual-band Synthetic Aperture Radar (L & S- band SAR):** For vegetation, ice, soil, and canopy monitoring.
- 12-metre **deployable antenna**; **open-data policy for global access**.

About SAR

- SAR is an active remote sensing technique sending pulses and recording their reflection from Earth.
- Unlike optical imagery (passive), SAR captures interactions with terrain, vegetation, ice, and soil moisture.

Why Synthetic?

- Higher **spatial resolution** requires impractically long antennas.
- SAR **combines multiple acquisitions** from a shorter antenna to simulate a larger one, **achieving high-resolution** imaging efficiently

Conclusion

Enhances disaster preparedness, climate resilience, sustainable development, and Earth observation capabilities for India.

7.2. Black Hole Merger

Why in the News?

An international network of gravitational wave observatories detected **merger of two massive black holes.**

More in the News

- **Black Holes:** 140 and 100 solar masses merged, **the largest observed merger.**
- **Event Name: GW231123**, occurred billions of years ago.

Significance of the event

- **Refine Astrophysical and Cosmological:** Helps update models of black hole formation, stellar evolution, gravity, cosmology, and particle physics.
- **Challenging black hole formation: Largest and fastest-spinning black holes detected**, suggesting complex formation history.
- **Hierarchical Mergers Insight:** Massive black holes like GW231123 may form via successive mergers, **possibly leading to supermassive black holes in galaxies.**
- **Gravitational Waves as a Tool:** Enable study of dark matter and dark energy, invisible to light; **predicted by Einstein in 1915 as ripples in space-time.**

Gravitational Wave Detection Network

- **LIGO (USA):** Largest observatory, two detectors at Hanford & Livingston.
  - LIGO-India planned in Hingoli, Maharashtra with DAE, DST and U.S. NSF collaboration.
- **Virgo (Italy):** Hosted by European Gravitational Observatory (Italy and France).
- **KAGRA, Japan:** Located inside the Kamioka mine.

Stellar Evolution
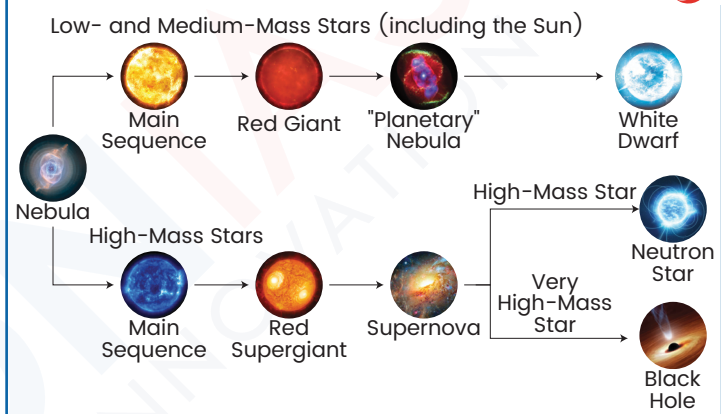
Black Holes

- **Black Hole:** A region in space with gravity so strong that even light cannot escape, formed by matter compressed into a tiny space.
- **Detection:** Invisible to telescopes; studied via effects on nearby stars and gas.
- **Formation**: Most form from massive stars' cores collapsing after supernovae; smaller cores may become neutron stars.
- **Types:** Stellar, super massive, intermediate and primordial.

7.3. News in Shorts

7.3.1. Bluetooth Mesh Networking

Twitter Co-Founder shared details of **Bluetooth Messaging App, Bitchat.**

Bitchat: Peer-to-peer messaging app by using **Bluetooth Low Energy Mesh Networking** to **enable communication, functioning without central servers or phone networks.**

What is Bluetooth Mesh Networking?

- Relies on **Bluetooth clusters** or **Mesh network.**
- **Mesh network** or "**multi-hop network**", is a networking topology.
  - **Data can travel from any device** to all others, achieving **many-to-many communication**.
  - Even if one device fails, the network keeps working.

Benefits
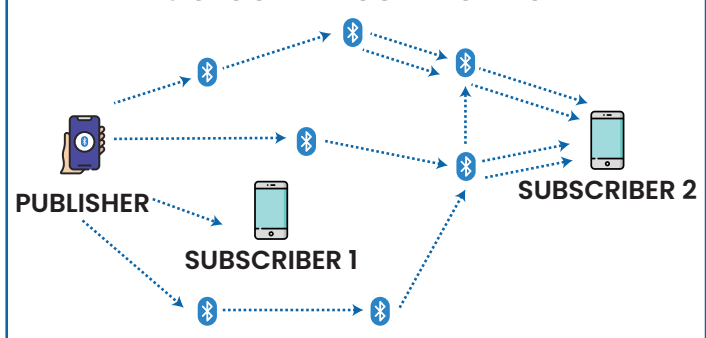
- **No central database: messages stored** on users' devices.
- **Prioritise users' privacy**.
- **No registration required,**
- Low Power Consumption, etc.

Key Limitations: High latency, Complex network management, low data transfer rates, etc.

Bluetooth Mesh Network

7.3.2. AI Alliance Network (AIANET)

Digital India Foundation (founding member of AIANET) has objected to membership application of Pakistan's AI Technology Centre (AITeC).

➲ DIF is not-for-profit think-tank aiming to foster digital inclusion, and use of Internet and related technologies for developmental process.

About AIANET

➲ **Informal voluntary network and community** for its Members to exchange views, share information and expertise.

➲ **Aim:** Accelerate development of AI technologies to enhance sustainable long-term prosperity and development.

➲ **Members:** 17 including India.

➲ **Administered by:** AI Alliance Russia

7.3.3. WHO Launches "3 By 35" Initiative

Initiative aims to raise prices of tobacco, alcohol, and sugary drinks by ≥50% via health taxes by 2035, potentially generating US$1 trillion globally.

➲ **Collaborative Alliance:** Involves development partners, civil society, academia, and national governments.

What is Health Tax?

➲ **Levied on products** harming **public health impac**t e.g. Tobacco, Alcohol etc.

➲ WHO recommends it to combat obesity and NCDs.

Need for Health Tax

➲ **Health Impact**: NCDs cause >75% of global deaths.

➲ **Economic Impact:** Tobacco alone cost US$1.4 trillion in 2012.

➲ **Revenue:** 50% tax could yield US$3.7 trillion in five years.

➲ **Equity:** Protects low-income populations disproportionately affected.

India Measures

➲ 28% GST + 12% cess on **aerated drinks.**

➲ **12% GST on High-fat sugar Salt (HFSS)** foods.

➲ **FSSAI limits Trans fatty acids (TFA)** to 2%.

Successful Global Case Studies

Colombia (2016): Higher cigarette tax led to 34% drop in consumption	Saudi Arabia: 50% Sugar-Sweetened Beverages (SSB) tax cut consumption by 19% in one year

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7.3.4. WHO/UNICEF Data On Immunization

WHO/UNICEF 2024 Estimates show significant progress on Immunization in India.

Key Findings

➲ **Global:** 89% of infants received ≥1 dose of DTP vaccine in 2024.

➲ **India:** Zero-dose children reduced by 43% (1.6 million → 0.9 million).

Universal Immunization Programme (UIP) India

➲ **Launched:** 1978 as Expanded Programme on Immunization, Rebranded as UIP in 1985.

➲ **Coverage:** Against 12 diseases:
→ **Nationwide (9):** Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, Childhood Tuberculosis, Hepatitis B and Meningitis & Pneumonia.
→ **Region-specific (3):** Rotavirus diarrhoea, Pneumococcal Pneumonia, and Japanese Encephalitis.

➲ **Full Immunization:** Child receives all scheduled vaccines within first year.

➲ **Achievements:** Polio-Free India (2014), Neonatal tetanus elimination (2015).

➲ **Key Initiatives:** Intensified Mission Indradhanush 5.0, U-WIN Portal, focus on Measles & Rubella coverage.

7.3.5. Phenome India National Biobank

National Biobank inaugurated at CSIR-Institute of Genomics and Integrative Biology (IGIB).

➲ Advancing India's **longitudinal health database**

➲ Enhances **Precision medicine** and **biomedical** research.

About National Biobank

➲ **Launched under:** Phenome India Project
→ Based on **UK Biobank model,** but customized for Indian diversity.

➲ **Purpose:** Supports early diagnosis, targeted therapeutic, and research on complex diseases using **AI-driven diagnostics** and **gene-guided therapies**.

➲ **Coverage:** Collect genomic, lifestyle, and clinical data from **10,000 individuals**.

Phenome India Project

➲ Officially called **Phenome India-CSIR Health Cohort Knowledgebase (PI-CheCK).**

➲ **Launched by:** CSIR in 2023.

➲ **Objective:** To track long term health trajectories.

Phenome

➲ It is entire set of **phenotypes** in a cell, tissue, organ, organism or species.

➲ **Phenotype** refers to the **observable physical characteristics** of an **organism**.
→ Include organism's **appearance, development, and behavior.**
→ It is determined by **genotype** (set of genes the organism carries) and **environmental influences** upon these genes.

CULTURE

8.1. Chola Gangam Lake

Why in the News?

Tamil Nadu government announced to develop **Chola Gangam Lake**.

More on the News

➲ Announced during **Aadi Thiruvathirai Festival,** marking Rajendra Chola I's birth anniversary.

➡ **Festival** commemorates **1,000 years of Rajendra Chola's Southeast Asia** maritime **expedition and Gangaikonda Cholapuram temple** construction.

➡ Honours **63 Nayanmars**, Chola-supported saint-poets and **Shaiva Siddhanta philosophy**.

About Chola Gangam Lake

➲ Chola Gangam Lake **(Ponneri Lake)**: **Largest ancient man-made lake** in India.

➲ **Location:** Near **Gangaikonda Cholapuram, Ariyalur District**, Tamil Nadu.

➲ **Construction:** By **Rajendra Chola I (1014 to 1044 CE),** son of Rajaraja I.

➡ Establish **Gangaikondacholapuram** as capital to celebrate his Gangetic expedition mentioned in **Tiruvalangadu Copper Plates**.

➡ Earning title **Gangaikonda Cholan**.

➲ **Chola rule**

➡ **Early Cholas:** Sangam period; Karikala Chola founded Puhar.

➡ **Imperial Cholas:** Rose to prominence from 9th century CE.

➡ **History:** Holy water from Ganges poured into lake; named Chōlagaṅgam; later called Poṉṉēri in Vijayanagara period.

➡ **Water Source**: Canal from Kollidam River (Kaveri distributary).

➡ **Structure:** Elliptical bunds strengthened with laterite stones.

➡ **Purpose:** Drinking water and irrigation.

Imperial Chola Empire
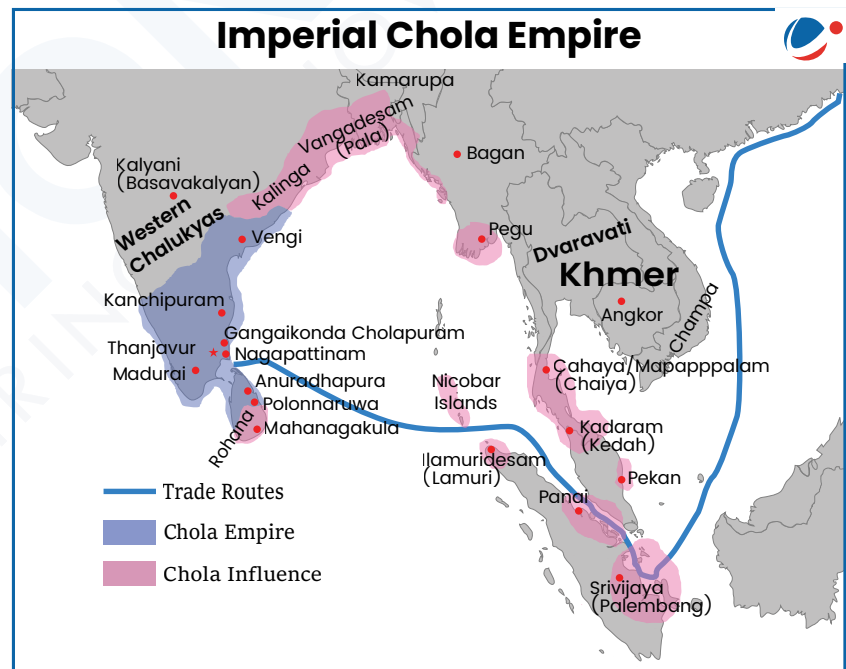
About Imperial Chola Dynasty (9ᵗʰ Century – 13ᵗʰ Century)

➲ **Beginnings:** Started as minor chiefs in **Uraiyur** under Pallava, rose to power in **9ᵗʰ century** under **Vijayalaya Chola**.

- ➲ **Key Inscriptions: Uttaramerur inscriptions** detail Chola administrative system and elections.
- ➲ **Administration**: Kingdom divided into **mandalams**, **valanadu**, **nadus**, **kurrams** and **kottams**.
- ➲ **Local Self Governance:** Village assembly known **(ur/ sabha)** with members elected by **kudavolai system.**
- ➲ **Tax System: Vetti** (forced labour), and **Kadamai** (land revenue).
- ➲ **Maritime**:
    - ➜ **Powerful Navy:** Under Rajaraja Chola and Rajendra Chola, notable **expedition against Srivijaya (1025).**
    - ➜ **Diplomatic/ trade relations** with Sri Lanka, China, Maldives, and Southeast Asia.
    - ➜ **Famous Ports**: Mahabalipuram, Kavirippumpattinam (Poompuhar), and Korkai.
- ➲ **Cultural Marvels:**
    - ➜ **UNESCO World Heritage Temples**: Gangaikonda Cholapuram, Airavatesvara, and Brihadeeswara.
    - ➜ Renowned for bronze sculptures, especially Nataraja.

Important Chola Temples

	About Brihadeeswara Temple	**About Gangaikonda Cholapuram Temple**	**About Airavatesvara Temple**
Location	Thanjavur	Gangaikonda Cholapuram	**Darasuram** in the Thanjavur district
Architecture	Dravidian	Dravidian	Dravidian with main stonework resembles a chariot.
Chief Deity	Lord Shiva	Lord Shiva	Lord Shiva
Time Period	1010 A.D.	1035 A.D.	12th century.
Built by	Rajaraja Chola I	Rajendra I	Rajaraja Chola II
Fact	Also known as Peruvudaiyar Kovil.	55-meter vimana. Also known as **Brihadeeswara temple.**	Named after 'Airavat', the majestic white elephant of Lord Indra.
UNESCO World Heritage Site	Yes	Yes	Yes
Special Feature	Narrate tale of rise and decline of city's fortunes.	Stone sculptures: Nataraja, Dakshinamurthy, Harahari, Lingodbhava, Vishnu, Brahma, Mahishasuramardhini, Gnana Saraswathi.	Stories from ancient Indian Puranas. Represent seven musical notes.

Conclusion

Chola Gangam Lake and temples reflect Cholas' engineering skill, maritime power, cultural patronage, and administrative vision, blending utility, art, and spirituality, leaving lasting legacy in architecture, water management, maritime expeditions, and Shaiva traditions that inspires Indian cultural pride.

8.2. Maratha Military Landscape

Forts in Maratha Military Landscape
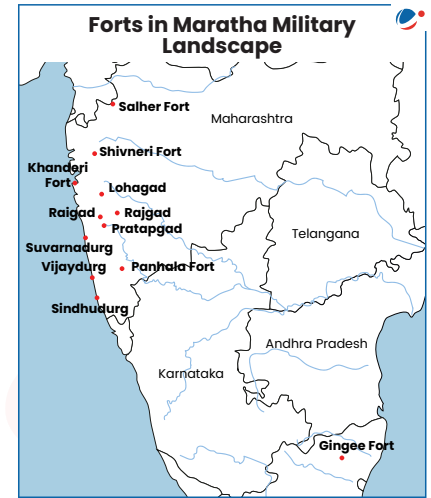
Why in the News?

Maratha Military Landscapes added to UNESCO World Heritage List as 44th site.

About Maratha Military Landscape

- ➲ **Geographical Spread:** Maharashtra and Tamil Nadu.
- ➲ **Strategic Locations:** Coastal forts, hilltop, **Sahyadri Ranges**, **Konkan Coast**, **Deccan Plateau**, and **Eastern Ghats**.
- ➲ **Evolution:** 17th – 19th century from **Chhatrapati Shivaji Maharaj** to Peshwas, showcasing Maratha **military vision and architectural ingenuity**.

Forts in Maratha Military Landscapes (12)	Key Features
Salher Hill fort	Site of 1672 Marathas – Mughal battle.
Shivneri Hill fort	Chhatrapati Shivaji's birthplace.
Lohgad Hill fort	Near Bhaje buddhist caves.
Raigad Hill fort	Shivaji permanent capital.
Rajgad Hill fort	**Base of 'Hindavi Swarajya'**; was retained after **Treaty of Purandar in 1665.**
Gingee Hill Fort (TN)	Three hilltop citadels, massive walls, cliffs
Pratapgad Hill Forest Fort	Afzal Khan fight site.
Panhala Plateau Hill Fort	Maratha capital under Tarabai.
Sindhudurg Island forts	Arabian Sea islet fort.
Suvarnadurg Island forts	Built by Bijapur ruler.
Khanderi Island forts	Built 1679 CE to monitor Siddhis at Murud-Janjira fort.
Vijay durg Coastal Fort	Captured from Adil Shah, called "Eastern Gibraltar".

About Maratha Empire

- ➲ **Foundation:** Established by **Chhatrapati Shivaji in 1674**; carved an independent kingdom from Deccan states.
- ➲ **Capitals:** Raigad Fort, Gingee, Satara, and Pune.
- ➲ **Extent:** Peshawar (North) to Thanjavur (South).
- ➲ **Administration: Ashtapradhan council of eight ministers** – Peshwa, Amatya, Sachiv, Mantri, Senapati, Sumant, Nyayadhyaksh, Panditrao.
- ➲ **Revenue Policy**
  - ➜ **Sardeshmukhi**: 10% tax on empire revenues.
  - ➜ **Chauth:** 1/4th from neighbouring non-Maratha Empire.
- ➲ **Decline:** After defeat in third Battle of Panipat (against Ahmad Shāh Abdali, 1761).

Conclusion

India demonstrates strong heritage preservation with **44 UNESCO World Heritage Sites** and **62 sites on Tentative List.**

8.3. International Chess Federation (FIDE) Chess Championship

Why in the News?

Divya Deshmukh became **first Indian woman to win FIDE Women's World Cup** title by defeating fellow Indian Koneru Humpy in Batumi, Georgia.

More on the News

- ➲ **Fourth Indian woman to become a Grandmaster** after Koneru Humpy, Dronavalli Harika, and R Vaishali.
- ➲ Qualifies for **2026 Candidates Tournament**.

Other Recent Achievements in Chess

- ➲ **GM Gukesh Dommaraju** became the youngest (2024) undisputed World Chess Champion, defeating Ding Liren.
- ➲ Indian **Men's and Women's Chess Teams** made (2024) won **gold** at **45th FIDE Chess Olympiad**, Budapest, Hungary.
- ➲ **GM Praggnanandhaa Rameshbabu** became the world's youngest (2023) chess player to reach World Cup final, 2ⁿᵈ Indian after **Viswanathan Anand**.
- ➲ **Abhimanyu Mishra (USA)** became the youngest International Master (2019, age 10) and later earned GM norms (2021).

About FIDE World Championship Cycle

- ➲ FIDE World Cup selects three players for **Women's Candidates Tournament.**
- ➲ **Candidates Tournament** is the final event in the World Championship cycle before the World Championship match.
- ➲ Candidates Tournament: 8-player double round-robin; winner challenges reigning World Champion.
- ➲ **Qualification** Include: runner-up of last World Championship, top 3 World Cup finishers, top 2 Grand Swiss, FIDE Circuit winner, highest FIDE rating holder.
- ➲ **World Chess Championship:** Played between reigning Champion and Candidates winner.

About International Chess Federation (FIDE)

- ➲ Governing body for international chess competitions.
- ➲ **Genesis**: 1924 (Paris), IOC recognition in 1999.
- ➲ **Headquarters:** Lausanne, Switzerland.
- ➲ **Members:** 201 countries.

8.4. News in Shorts

8.4.1. Kashmiri Pashmina Shawl

Indian PM Gifts Handicrafts (Kashmiri Pashmina shawl) **during Ghana Visit.**

Kashmiri Pashmina shawl

- ➲ Woven from fine undercoat of **Changthangi (Pashmina) goat** from high-altitude Ladakh,
- ➲ Celebrated for its softness and warmth.

Other Handicrafts

- ➲ **Bidriware vases (Bidar, Karnataka)**: **Zinc-copper alloy** with black finish, silver inlay, engraved floral motifs symbolizing beauty, prosperity, harmony.
- ➲ **Silver filigree purse (Cuttack, Odisha)**: **Tarakasi work** with intricate floral and vine designs in modern style.
- ➲ **Miniature Ambawari elephant (West Bengal):** Crafted from polished synthetic ivory, an ethical alternative to natural ivory.

All the listed handicrafts, except the Miniature Ambawari Elephant, have been granted a Geographical Indication (GI) tag.

8.4.2. Piprahwa Relics

India witnessed return of **Lord Buddha's** sacred **Piprahwa Relics**.

About Piprahwa Relics

- ➲ **Discovery: 1898** by British civil engineer **William Claxton Peppé** in **Piprahwa, Siddharthnagar** (ancient Kapilavastu), Uttar Pradesh.
- ➲ **Significance:** Associated with **mortal remains** of Buddha.
- ➲ **Key Features:** Include bone fragments, soapstone and crystal caskets, a sandstone coffer, and offerings like gold ornaments, etc.
- ➲ **Enshrined Around:** 3rd century BCE.
  - ➜ A **Brahmi Script Inscription** on one of the caskets confirms them as Buddha relics, deposited by **Sakya Clan.**

Classified as: 'AA' antiquities under Indian law, prohibiting their removal or sale.

ETHICS
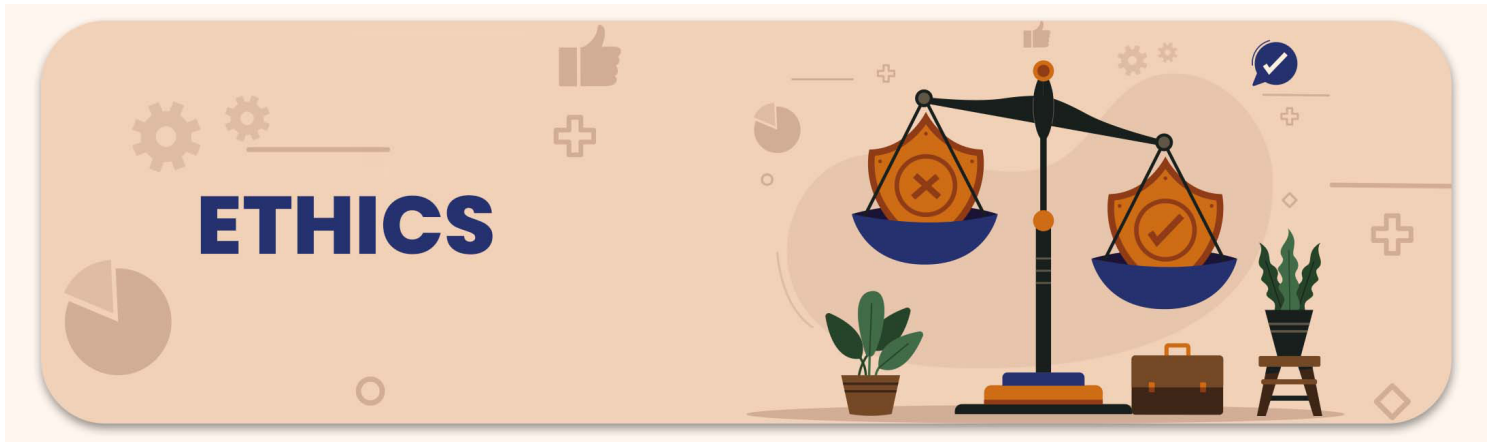
9.1. Celebrities and Endorsement of Products

Introduction

Enforcement Directorate (ED) charged many celebrities, including popular actors and TV hosts, for allegedly **promoting illegal betting apps,** violating gambling and money laundering laws.

Stakeholders	Key Interests
Celebrities	**Ensuring public welfare**, otherwise risk to personal credibility. **Moral duty of role models** is upholding the **highest ethical standards.**
Companies/Platforms	**Maximising profits** and market reach. **Respecting law of the land** upholding and corporate social responsibility.
Government Agencies	Enforcing laws, **protecting consumers**, preventing money laundering. **Maintain trust in public systems** by curbing unlawful promotions.
Society at large (especially youth)	Maintaining **informed decision-making** under celebrity influence. Potential for **financial losses, addiction,** or unlawful activity participation.

Key Ethical Issues in Celebrity Endorsement of Harmful Products

- ⮩ **Autonomy & Consent**: Emotional appeal hides risks, violating Kantian ethics; ASCI requires disclosure and truthful claims.
- ⮩ **Accountability**: Gandhian trusteeship demands using fame for welfare; Consumer Protection Act, 2019 makes endorsers liable.
- ⮩ **Beneficence & Non-Maleficence**: Celebrities must "do good, not harm"; endorsing harmful products breaches this.
- ⮩ **Role-Model Integrity**: Virtue ethics stresses honesty; repeated questionable ads erode moral authority.

Challenges

- ⮩ High financial incentives override ethics.
- ⮩ Celebrities rely on company claims → misinformation risk.
- ⮩ Celebrity worship hinders accountability.
- ⮩ Fast-emerging sectors (crypto, betting) outpace regulation.
- ⮩ Regulators lack capacity to monitor vast endorsements.

Way Forward

- ⮩ Celebrities should self-audit, ensure legality, disclose promotions, and support public-good causes.
- ⮩ Brands must prioritize social responsibility.
- ⮩ Stronger frameworks: sector rules, mandatory disclosure, self-regulation councils.
- ⮩ Awareness campaigns to foster critical consumers.
- ⮩ Collective moral duty beyond punishment.

Conclusion

Celebrity endorsements carry moral weight; fame must be exercised as public trust with responsibility.

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GOVERNMENT SCHEMES

10.1. Pradhan Mantri Kisan Sampada Yojana (PMKSY)

Why in the News?

Cabinet approved ₹1920 crore additional outlay for **PMKSY during 15th Finance Commission cycle.**

Features:

- **Ministry:** Ministry of Food Processing Industries (MoFPI)
- **Type:** Central Sector Scheme
- **Tenure:** From 2021-22 to 2025-26
- **Originally approved** as (Scheme for Agro-marine processing and Development of Agro-processing Clusters) SAMPADA in 2017; renamed PMKSY with some components discontinued.

Objectives:

- Create **modern infrastructure and efficient supply** chain from farm to retail.
- Provide **better returns to farmers**
- **Reduce agricultural wastage,** increase processing, and boost processed food exports.

Component of PMKSY:

- **Integrated Cold Chain:** Cold chain facilities from farm to consumer by firms, cooperatives, SHGs, FPOs, NGOs, PSUs; fruits and vegetables cold chain under Operation Greens.
- **Agro Processing Cluster:** Small food processing units on minimum 10 acres.
- **Food Processing Capacity:** Expand/modernize units in Mega Food Parks and APCs by PSUs, private firms, cooperatives, etc.
- **Food Safety & Quality:** Support for testing labs and certifications (HACCP, ISO 22000).
- **Human Resource & Research:** 100 R&D projects sanctioned under 15th FC.
- **Operation Greens (OG):** Launched 2018-19 Budget, initially for Tomato, Onion, Potato (TOP); long term covers 22 crops, short term expanded from TOP to all fruits and vegetables (TOP to TOTAL).
- **Financial Management:**
  - **Inter-scheme Reallocation:** Minister can approve 25% outlay reallocation post mid-term review.
  - **Use of Savings:** Savings from committed liabilities used for new projects.
- **Awareness:** Wide publicity to maximize stakeholder benefits from PMKSY.

QUICK FACTS

Topics	Key facts/Data
Digital Colonialism	**Measures taken to tackle digital colonialism** ➲ **India:** 　➡ **Digital Personal Data Protection Act, 2023 (DPDP Act)** 　➡ **Competition Act, 2002** 　➡ **ONDC (Open Network for Digital Commerce)** ➲ Global: **Data Act, Data Governance Act, AI Act,** and **General Data Protection Rules**
Online Content Regulation	➲ The Supreme Court in ***Ranjit D. Udeshi v. State of Maharashtra*** **(1965)** defined obscenity as a reasonable restriction to free speech (Article 19) ➲ **Regulatory framework for regulation of obscene content** 　➡ The IT Act 2000 　➡ IT rules 2021 under IT Act, 2000 issued by Ministry of Electronics and Information Technology (Meity) 　➡ Section 294 of the Bhartiya Nyaya Sanhita (BNS) 2023
National Cooperative policy 2025	➲ **Vision**: To make cooperatives key drivers for **Viksit Bharat 2047** through **Sahkar-se-Samriddhi**. ➲ **Objectives:** To bring 50 crore citizens, who are either not members or are inactive in the cooperative sector, into active participation. ➲ **Cooperatives Constitutional Status: The 97th Amendment, 2011,** granted constitutional status to the Cooperative Societies with the following provisions- 　➡ **Fundamental Right:** Added "cooperative societies" in Article 19(1)(c). 　➡ **Directive Principle:** Inserted Article 43B to promote cooperatives. 　➡ **New Part IXB:** Added Articles 243ZH to 243ZT for cooperative governance.
Inter State water Dispute	**Legal and Constitutional Framework to resolve dispute** ➲ **Article 262:** Provides for the adjudication of inter-state water disputes. ➲ **The River Boards Act, 1956:** This empowers Union Government to establish River Boards for the regulation of inter-state rivers and river valleys in consultation with State Governments. ➲ **Inter-State River Water Disputes Act, 1956:** Union Government can establish a tribunal for the adjudication of inter-state river water dispute if requested by the state.
Lowering of Age for voting	**Constitutional provisions related to voting age in India** ➲ **Article 326** provides for **universal adult suffrage** for every citizen who is **not less than 18 years** of age. 　➡ India reduced the voting age from 21 to 18 years through **61st Constitutional Amendment in 1988**. 　➡ Right to Vote is a **statutory right** that can be amended by **ordinary law** of the Parliament.

Removal of Judges in Higher Judiciary	➲ **Article 124(4):** Removal of SC judges on proven misbehavior or incapacity. ➲ **Article 124(5):** Parliament regulates procedure by Judges Enquiry Act, 1968. ➲ **Article 217(1)(b):** HC judge removed by President in same manner as SC judge under Art. 124(4). ➲ **Article 218: It extends the** Applicability of **clause (4) and clause (5) of article 124 to High courts.**
India-United Kingdom (UK) Comprehensive Economic and Trade Agreement (CETA)	➲ **Over 99% of tariff lines eliminated**, nearly India's whole trade basket. ➲ India opened **89.5% of tariff lines, covering 91% of UK exports.** ➲ UK allows Indian professionals, investors **stays from 90 days up to 3 years.** ➲ **Sensitive sectors** (dairy, cereals, gold, jewellery, etc.) protected. ➲ Exporters may self-certify product origin.
India-Maldives Relations	➲ India was one of the first to **recognize Maldives after its 1965 independence.** ➲ Maldives sits like a **'toll gate'** between the **western Indian Ocean (Gulf of Aden, Strait of Hormuz) and eastern Indian Ocean** (Strait of Malacca). ➲ Extension of **INR 4,850 crores Line of Credit to Maldives** and **reduced debt repayment** on India-funded LoCs.
India-Brazil	➲ **Bilateral Cooperation**: Strategic Partnership from 2006. ➲ **Global Cooperation:** Engage actively in plurilateral fora (BRICS, BASIC, G-20, G-4, IBSA) and multilateral bodies (UN, WTO, UNESCO, WIPO). ➲ **Trade**: In 2024-25, bilateral trade reached USD 12.20 billion with India in trade surplus. ➲ **Defence Cooperation:** 2006 agreement established Joint Defence Committee (JDC). ➲ **Renewable Energy**: Brazil co-founded Global Biofuel Alliance and ratified ISA Agreement in 2022.
Girmitiyas	**About Girmitiyas** ➲ **Girmitiyas were Indian indentured labourers** who migrated in the 19th century after Britain's Slavery Abolition Act 1833 caused labour shortages. ➲ "**Girmit" is a mispronunciation of "Agreement**," the migration contract. ➲ **Distribution**: Mauritius, Fiji, West Indies, South Africa, Caribbean (mainly Trinidad and Tobago, Guyana, Suriname, and Jamaica).
Kaladan Multimodal Transit Transport Project (KMTTP)	➲ **Nodal Ministry**: Ministry of External Affairs ➲ **Project Development Consultant:** Inland Waterways Authority of India (IWAI). ➲ **Transit Components:** ➜ **Waterway:** Kaladan River from **Sittwe Port to Paletwa in Myanmar**. ➲ **Road**: **Paletwa to Zorinpui** on India-Myanmar border in Mizoram.
Group of Friends (GoF)	➲ **About GOF** ➲ **Indian-led initiative** promoting accountability for violence against UN peacekeepers. ➲ Drives **United Nations Alliance of Civilizations (UNAOC) strategic planning and implementation.**
Red Sea	➲ **Marginal sea** in northwest Indian Ocean. ➲ Connects **Gulf of Aden via Bab El Mandeb Strait and Mediterranean** via Suez Canal. ➲ **Borders:** Egypt, Sudan, Eritrea (West); Israel, Jordan (Northeast via Gulf of Aqaba); Saudi Arabia, Yemen (East).
Henley Passport Index 2025	➲ India's Henley Passport Index rank improves **from 85 (2024) to 77 (2025).**

Prime Minister Dhan-Dhaanya Krishi Yojana (PMDDKY)	➲ **Implemented** By Ministry of Agriculture and Farmers' Welfare and monitored **through three-tier structure National-level oversight bodies**, State-level nodal committees, and District Dhan Dhaanya Samitis with **NITI Ayog review.** ➲ **Saturation-based convergence: Consolidates central, state** schemes and local partnerships. ➲ **Progress tracking**: Using 117 Key Performance Indicators (KPIs).
Public Debt in India	➲ **Public debt**, also known as 'national debt', is the accumulated amounts of borrowing that **government, and other public sector bodies**, owe to the private sector and foreign governments. ➲ **Internal debt is 96.59%** and external debt is **3.41%** of total public debt of 18,174,284 crore.
Financial Inclusion in India	➲ **FI-Index** captures financial inclusion across the country while representing different sectors such as banking, investment, insurance, pension etc. Three sub-indices of index i.e. Access, Usage and Quality.
Digital India Mission	➲ **Implemented by** Ministry of Electronics and Information Technology (MeiTY). ➲ **Aims** to build a digitally empowered society and knowledge economy through PPPs. Its vision rests on three areas—digital infrastructure, governance on demand, and digital empowerment—implemented via nine pillars including broadband highways, e-kranti, IT for jobs, and e-governance.
Stablecoins	➲ Stablecoins are a type of **cryptocurrency** whose value is linked to that of another **currency**, **commodity**, or financial instrument. E.g., **Tether (USDT)**, is pegged to the US dollar.
CROPIC (Collection of Real Time Observations & Photo of Crops) initiative	➲ Mobile app launched by **The Ministry of Agriculture** under **Pradhan Mantri Fasal Bima Yojana (PMFBY)** to capture geotagged crop photos during crop cycles.
AGRICULTURAL OUTLOOK 2025-2034 RELEASED BY OECD-FAO	➲ **Released By: OECD and FAO**. ➲ Provides a comprehensive assessment of the ten-year prospects for agricultural commodities, markets at national, regional, and global levels.
Global Capability Centre (GCC)	➲ **GCCs are also known as Global In-house Centres (GICs),** GCCs are offshore units of global firms providing IT, R&D, and customer support within the parent company's structure. India attracts them due to cost efficiency, policy support, talent availability, and a large consumer base.
Aluminium and Copper	➲ Aluminium/Bauxite: India's reserves mainly in Odisha (41%), Chhattisgarh, Andhra; Odisha leads production (73%). Globally, China (58%) is top producer, followed by Australia, Brazil, India. ➲ Copper: India's reserves—Rajasthan (52%), MP, Jharkhand; production led by MP (57%), Rajasthan (43%). Globally, Chile (19% reserves) leads, followed by Peru and Australia.
OPERATION- MED MAX	➲ Narcotics Control Bureau (NCB) operation to crack down on illegal pharma trade.
PRALAY MISSILE	➲ A **surface-to-surface short range solid propellant quasi-ballistic missile** which can fly at **hypersonic speed (Above Mach 5) with range** from 150 to 500 km.
Bharat NCX	➲ National Cybersecurity Exercise. ➲ Conducted by **National Security Council Secretariat (NSCS)** in collaboration with **Rashtriya Raksha University (RRU), Gandhinagar, Gujarat.**
Jaa Mata	➲ It is a **joint sea exercise** between **Japan** and **India Coast Guard.**
Urban Resilience	➲ Ability of an urban system to maintain or rapidly return to desired functions in the face of a disaster, adapt to change, and quickly transform limiting systems.

Ethanol Blending	**Ethanol**: A renewable fuel (C_2H_5OH) produced from sugarcane, maize, wheat, etc., via fermentation or petrochemical processes. ➲ **Types**: 1st Generation (food crops), 2nd Generation (ligno-cellulosic biomass), 3rd Generation (aquatic biomass like algae), and 4th Generation (engineered plants).
CSS-Integrated Development of Wildlife Habitats Scheme (CSS-IDWH)	A **Centrally Sponsored Scheme** under the **Ministry of Environment, Forest and Climate Change**. Provides financial assistance for Protected Areas, wildlife protection outside PAs, and **recovery programmes for 22 critically endangered species** (e.g., Snow Leopard, Asiatic Lion). **Gharial: Critically Endangered (IUCN Red List)**. Known for its unique 'Ghara' bulb-like structure on the snout of adult males. ➲ **Sloth Bear: Vulnerable (IUCN Red List)**. Native to India, Nepal, Sri Lanka. Specializes in eating termites and ants and does not hibernate. **Daroji Sloth Bear Sanctuary (Karnataka) is Asia's first dedicated sanctuary**.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	Voluntary international agreement,1975. Aims to ensure international trade doesn't threaten species survival, enforced through a licensing system. **India ratified in 1976**. ➲ **Key Initiatives**: **MIKE Programme**, **International Consortium on Combating Wildlife Crime (ICCWC)**.
Pacific Ring of Fire	➲ A horseshoe-shaped belt around the Pacific Ocean accounting for **~75% of active volcanoes and ~90% of earthquakes globally**.
Sustainable Development Goals Report (SDGR) 2025 & National Indicator Framework (NIF) Progress Report 2025	**SDGR**: UN official report monitoring global progress on the 2030 Agenda. Highlights challenges like **8.9% population in extreme poverty**, **1 in 11 people facing hunger**, and **1.12 billion living in slums**. **2024 was the hottest year on record**. ➲ **NIF**: Launched by **MoSPI** to monitor SDGs at the national level in India.
5 Years of National Education Policy (NEP) 2020	➲ Drafted on recommendations of the **Kasturirangan Committee**. ➲ **Key Schemes/Initiatives**: **PM SHRI** (revamping 14,500+ schools), **NIPUN Bharat** (ensuring Foundational Literacy and Numeracy), **One Nation One Subscription (ONOS)**, **ULLAS/Nav Bharat Saaksharta Karyakram** (adult literacy), and **Vidyanjali** (school volunteer program).
Social Isolation	➲ **Social connection** (relating and interacting with others) vs. **Social disconnection** (insufficient social contact, strained relationships). Forms include **Loneliness** (discrepancy in desired vs. actual connection) and **Social isolation** (few relationships, rare contact).
Child Adoption	➲ Governed by the **Hindu Adoption and Maintenance Act of 1956** and the **Juvenile Justice (Care and Protection of Children) Act, 2015**. ➲ **Nodal Agency**: **Central Adoption Resource Authority (CARA)**, established under the JJ Act, regulates domestic and intercountry adoptions. Adheres to the **Hague Convention on Protection of Children and Cooperation in Respect of Intercountry Adoption (1993)**.
Kashi Declaration	➲ Sets a **5-year roadmap for the De-Addiction Movement**.
TALASH Initiative	➲ **Launched by**: National Education Society for Tribal Students (NESTS) under the **Ministry of Tribal Affairs**, in partnership with **UNICEF India**. ➲ **Purpose**: National program for the all-round development of students in **Eklavya Model Residential Schools (EMRSs)**.
NISAR (NASA-ISRO Synthetic Aperture Radar) Satellite	➲ By **ISRO and NASA**, **Sun Synchronous Polar Orbit**
Black Hole Merger	➲ Detected by the **LVK network of observatories (LIGO, Virgo, and KAGRA)**. ➲ **Gravitational Waves**: 'Ripples' in space-time predicted by Albert Einstein. Crucial for studying dark matter and dark energy.

Bluetooth Mesh Networking	➲ A **networking topology (multi-hop network)** where devices in a range form Bluetooth clusters, allowing data to travel from any device to all others. Messages are broadcast and relayed by nodes.
AI Alliance Network (AIANET)	➲ An informal voluntary network aimed at accelerating the development and deployment of AI technologies for prosperity and development. **Members**: **17 countries, including India**. Administered by AI Alliance Russia.
WHO Launches "3 By 35" Initiative	➲ Raise prices of tobacco, alcohol, and sugary drinks by at least **50% through health taxes by 2035**.
Phenome India National Biobank	➲ Building India's own longitudinal health database, enhancing precision medicine and biomedical research. Will aid in **early diagnosis, therapeutic targeting**, and fighting complex diseases.
Chola Gangam Lake	➲ Also known as **Ponneri Lake**, recognized as the **largest ancient man-made lake in India**. ➲ Built by **Rajendra Chola I** (1014 to 1044 CE) in Gangaikonda Cholapuram. Rajendra Chola I conquered the Ganga valley, earning the title **Gangaikonda Cholan**. The lake was created with holy water from the Ganges, symbolizing his victory.
Maratha Military Landscape	➲ **Key Forts (12)**: Includes **Salher** (Maratha-Mughal battle), **Shivneri** (Shivaji's birthplace), **Raigad** (Shivaji's permanent capital), **Rajgad** (first political base of 'Hindavi Swarajya'), and **Gingee Hill Fort (Tamil Nadu)**. **Vijaydurg** was called the "Eastern Gibraltar". ➲ **Maratha Empire**: Founded by Chhatrapati Shivaji in 1674. Known for 'Ashtapradhan' administration and revenue policies like **Sardeshmukhi** (10% tax on kingdom's revenue) and **Chauth** (1/4th revenue from neighboring chieftains). ➲ **UNESCO WHS**: India now has **44 WHS** (36 cultural, 7 natural, 1 mixed), ranking **6th globally and 2nd in Asia-Pacific**.
International Chess Federation (FIDE) Chess Championship	➲ **Divya Deshmukh** became the **first Indian woman to win the FIDE Women's World Cup title** and the fourth Indian woman Grandmaster.
Kashmiri Pashmina Shawl	➲ Woven from the fine undercoat of the **Changthangi goat** found in Ladakh. Celebrated for its softness and warmth. It has been granted a **Geographical Indication (GI) tag**.

ACTIVITIES

12.1. MCQS

1. **Which of the following constitutional provisions lowered the voting age from 21 to 18 years?**
   1. 42nd Amendment, 1976
   2. 61st Amendment, 1988
   3. 73rd Amendment, 1992
   4. 97th Amendment, 2011

2. **Which body prepares the State of Devolution Report for Panchayati Raj Institutions (PRIs)?**
   (a) Finance Commission
   (b) Ministry of Panchayati Raj (MoPR)
   (c) NITI Aayog
   (d) State Finance Commissions

3. **With reference to the Inter-State River Water Disputes in India, consider the following statements:**
   1. Article 262 of the Constitution empowers the Parliament to adjudicate inter-state water disputes.
   2. The Supreme Court can directly adjudicate original disputes related to inter-state rivers.
   3. The Inter-State River Water Disputes Act, 1956 provides for setting up of tribunals for adjudication of disputes.
   Which of the above statements is/are correct?
   (a) 1 and 2 only
   (b) 2 and 3 only
   (c) 1 and 3 only
   (d) 1, 2 and 3

4. **Consider the following provisions related to Cooperatives in India:**
   1. The 97th Constitutional Amendment inserted Article 43B under Directive Principles of State Policy.
   2. Part IXB of the Constitution (Articles 243ZH to 243ZT) deals with cooperative societies.
   3. Multi-State Cooperative Societies fall under the State List of the Constitution.
   Which of the above statements is/are correct?
   (a) 1 and 2 only
   (b) 2 and 3 only
   (c) 1 and 3 only
   (d) 1, 2 and 3

5. **The Medog Hydropower Project being built by China is located on which river?**
   1. Irrawaddy
   2. Mekong
   3. Yarlung Tsangpo
   4. Indus

6. **The Geelong Treaty is associated with:**
   1. BRICS economic cooperation
   2. AUKUS submarine partnership
   3. MERCOSUR trade liberalization
   4. Indo-Pacific QUAD framework

7. **The term "Girmitiya" historically refers to:**
   1. Indian students studying abroad on colonial scholarships
   2. Indian indentured labourers under colonial contracts
   3. Workers recruited for British navy during World War II
   4. Diaspora merchants in East Africa

8. **The Kaladan Multimodal Transit Transport Project (KMTTP) links India's Northeast with which country?**
   1. Bangladesh
   2. Bhutan
   3. Myanmar
   4. Thailand

9. **With reference to Pradhan Mantri Dhan Dhaanya Krishi Yojana (PMDDKY), consider the following statements:**
   1. It will be implemented by the Ministry of Agriculture and Farmers' Welfare and monitored through a three-tier structure.
   2. NITI Aayog will finalize 100 districts for coverage under the scheme based on parameters like crop productivity and credit access.
   3. The scheme provides only grants and subsidies and excludes loans or credit support.
   4. Overseas training opportunities for farmers are included as part of the scheme.

   Which of the statements given above are correct?
   (a) 1 and 2 only
   (b) 1, 2 and 4 only
   (c) 2 and 3 only
   (d) 1, 3 and 4 only

10. **With reference to the Employment Linked Incentive (ELI) Scheme, consider the following statements:**
    1. The scheme is implemented by the Ministry of Skill Development and Entrepreneurship.
    2. First-time employees earning up to ₹1,00,000 per month and registered with EPFO are eligible for benefits.
    3. Employers in the manufacturing sector are eligible for incentives for an extended period compared to other sectors.
    4. The incentive to employers is given only in the form of a one-time grant.

    Which of the statements given above are correct?
    (a) Only One
    (b) Only two
    (c) Only Three
    (d) All four

11. **With reference to Intellectual Property Rights (IPR) in India, consider the following statements:**
    1. The Controller General of Patents, Designs, and Trade Marks (CGPDTM) administers all forms of IPR in India under the Department for Promotion of Industry and Internal Trade (DPIIT).

    2. India has recently adopted the Locarno Classification system, which is related to the classification of designs.
    3. Geographical Indications (GIs) are registered under the Copyright Act, 1957.
    4. India has risen to the 6th position globally in patent filings as of 2023.

    Which of the statements given above are correct?
    (a) 1 and 2 only
    (b) 2 and 4 only
    (c) 1, 2 and 4 only
    (d) 1, 2, 3 and 4

12. **Consider the following statements regarding Project 17A Frigates:**
    1. Project 17A is the follow-on of Project 17 (Shivalik class) frigates currently in service.
    2. Project 17A frigates are designed primarily for anti-submarine warfare only.
    3. These frigates are equipped with advanced stealth features and state-of-the-art weapons and sensors.

    Which of the above statements is/are correct?
    (a) 1 and 2 only
    (b) 1 and 3 only
    (c) 2 and 3 only
    (d) 1, 2 and 3

13. **With reference to the Extended Range Anti-Submarine Rocket (ERASR), consider the following statements:**
    1. It is an indigenous anti-submarine rocket developed to be launched from Indian Naval Ships.
    2. ERASR uses a twin-rocket motor configuration and an indigenously developed Electronic Time Fuze.
    3. It is primarily designed to target supersonic aircraft.

    Which of the above statements is/are correct?
    (a) Only One
    (b) Only two
    (c) All three
    (d) None

14. **The Astra Missile recently tested by DRDO and IAF is significant because:**
    1. It is India's first indigenous Beyond Visual Range Air-to-Air Missile (BVRAAM).
    2. It has an operational range exceeding 100 km.
    3. It is capable of engaging highly manoeuvring supersonic aircraft in all weather, day and night conditions.

Which of the above statements are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

15. **With reference to India's efforts towards urban resilience, consider the following statements:**

1. India's urban population is projected to reach 1.1 billion by 2070, with over 70% of new jobs expected in cities by 2030.

2. Pluvial flooding risk is rapidly increasing, with annual losses estimated at $5 billion by 2030.

3. The private sector contributes significantly to urban infrastructure financing, accounting for over 50% of total investments.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

16. **Regarding India's Ethanol Blending Programme, consider the following statements:**

1. India has achieved its 20% ethanol blending target in petrol by 2025.

2. The National Policy on Biofuels (2018), as amended in 2022, advanced the 20% blending target to 2025-26 from 2030.

3. 1st Generation Ethanol is primarily made from ligno-cellulosic biomass or agricultural residues.

Which of the statements given above is/are correct?

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

17. **Consider the following statements regarding the National Education Policy (NEP) 2020:**

1. It is the first education policy in independent India.

2. The policy aims for multilingualism, recommending the medium of instruction until at least Grade 5 (preferably Grade 8 and beyond) in local languages.

3. The Academic Bank of Credit (ABC) is a key feature in higher education, allowing digital storage of academic credits.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

18. **With reference to the recently detected Black Hole Merger GW231123, consider the following statements:**

1. It involved the merger of two black holes, one 140 times and the other 100 times more massive than the Sun.

2. The detection was made by the LVK network of observatories, which includes LIGO in the United States and KAGRA in Japan.

3. The event challenges the current understanding of black hole formation due to the extremely massive and fast-spinning nature of the black holes involved.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

19. **With reference to the Maratha Military Landscapes of India, recently added to the UNESCO World Heritage List, consider the following statements:**

1. The Maratha Military Landscapes are located exclusively in the state of Maharashtra.

2. The Gingee Hill Fort, located in Tamil Nadu, is one of the sites included in this designation.

3. Raigad Hill Fort, selected by Chhatrapati Shivaji for his permanent capital, is part of this landscape.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

20. **Consider the following statements regarding the Piprahwa Relics:**

1. The relics were discovered in Piprahwa, Uttar Pradesh, and are associated with the mortal remains of Lord Buddha.

2. A Brahmi script inscription on one of the caskets confirms them as Buddha relics, deposited by the Maurya clan.

3. Under Indian law, these relics are classified as 'AA' antiquities, which prohibits their removal or sale.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

12.2. True/False Statements

1. The 97th Amendment gave constitutional status to cooperatives.
2. The right to vote in India is a fundamental right under Article 19(1)(a).
3. The National Standards for Civil Service Training Institutes (NSCSTI) 2.0 framework is part of Mission Karmayogi.
4. The International Criminal Court (ICC) was established under the Rome Statute, effective from 2002.
5. The Henley Passport Index 2025 ranks India at 77th, with 59 destinations visa-free.
6. The Red Sea receives large freshwater inflows from surrounding rivers.
7. Digital Payments Index (DPI) is published semi-annually by RBI to track digital adoption.
8. Financial Conditions Index (FCI) measures relative tightness/ease of conditions since 2012 using 5 segments money, G-sec, corporate bonds, forex, equity.
9. Global Findex 2025 is released by World Bank.
10. Talisman Sabre Exercise is multination exercise between France, Germany, India and others.
11. The Urban Heat Island (UHI) effect in major Indian cities results in nighttime temperatures consistently 1-2°C lower than surrounding rural areas.
12. 1st Generation Ethanol is derived from aquatic biomass like algae.
13. The Gharial is the only visibly sexually dimorphic crocodilian species.
14. The CITES Secretariat is administered by IUCN and located in Geneva, Switzerland.
15. The National Education Policy (NEP) 2020 was drafted on the recommendations of the Kothari Commission.
16. According to the WHO report, young people (13-29) are reported to feel the loneliest globally.
17. The Central Adoption Resource Authority (CARA) is established under the Hindu Adoption and Maintenance Act of 1956.
18. NISAR is the world's first Earth observation satellite to integrate both L-band and S-band SAR on a single platform.
19. The Chola Gangam Lake, also known as Ponneri Lake, is the largest ancient man-made lake in India.
20. The Maratha Military Landscapes of India, now a UNESCO World Heritage Site, are spread across only Maharashtra.

12.3. Mains Practice Questions

1. Digital Colonialism poses a serious threat to India's sovereignty. Discuss with reference to recent government measures. (10 Marks, 150 Words)
2. Lowering of voting age can strengthen democracy but may pose challenges of maturity and logistics." Discuss. (10 Marks, 150 Words)
3. Critically analyze the significance of the India–UK Comprehensive Economic and Trade Agreement (CETA) in reshaping bilateral relations. (10 Marks, 150 Words)
4. Evaluate the implications of China's Medog Hydropower Project on India's security. (10 Marks, 150 Words)
5. India's rising public debt poses a challenge to fiscal sustainability and intergenerational equity. Discuss the major reasons behind the rise in public debt and critically examine the measures needed to ensure prudent debt management. (10 Marks, 150 Words)
6. The recently approved RDI Scheme is seen as a game-changer in strengthening India's innovation ecosystem. Discuss its significance in addressing challenges of R&D in India. Suggest measures to further boost private sector participation in research and innovation. (10 Marks, 150 Words)
7. India is rapidly urbanizing, but this growth is accompanied by significant environmental and governance challenges that threaten urban resilience. Discuss the key vulnerabilities and challenges faced by Indian cities in building disaster resilience, and evaluate the recommendations proposed to address them. (10 Marks, 150 Words)
8. Examine the objectives and significance of the Phenome India National Biobank in advancing precision medicine and biomedical research in India. How does this initiative leverage data for combating complex diseases? (10 Marks, 150 Words)
9. Discuss the factors contributing to Student's Mental Health Crisis in India. (10 Marks, 150 Words)
10. What is Bluetooth Mesh Networking? Also highlight its potential significance. (10 Marks, 150 Words)
11. Evaluate the role of Panchayati Raj finances in strengthening grassroots democracy. (15 Marks, 250 Words)
12. Critically examine the challenges in resolving Inter-State Water Disputes (ISWD) in India. (15Marks, 250 Words)

13. Despite historical ties and growing engagement, India's Africa policy faces multiple challenges. Identify these challenges and suggest measures to enhance India–Africa partnership. (15 Marks, 250 Words)

14. Recent large-scale layoffs in the IT sector highlight the challenges and opportunities posed by the Future of Work. Discuss the key drivers shaping the Future of Work and evaluate the role of government initiatives in preparing India's workforce for these transformations." (15 Marks, 250 Words)

15. Quantum computing poses both an existential threat and a transformative opportunity for cybersecurity. Discuss the major risks posed by quantum technologies to existing digital infrastructure and critically evaluate India's preparedness. (15 Marks, 250 Words)

16. India's commitment to ethanol blending represents a transformative approach to energy security and environmental sustainability. Critically analyze the key challenges faced by India in achieving its ethanol blending targets, and discuss the initiatives undertaken to overcome these hurdles. (15 Marks, 250 Words)

17. The National Education Policy (NEP) 2020 aims to transform India's educational landscape. Discuss the key achievements of NEP 2020 in school and higher education, and critically analyze the significant hurdles encountered in its implementation. (15 Marks, 250 Words)

18. Discuss the multifaceted significance of the NISAR (NASA-ISRO Synthetic Aperture Radar) satellite mission, highlighting its key technological features and potential applications in Earth observation for sustainable development and disaster management. (15 Marks, 250 Words)

19. The recent inclusion of Maratha Military Landscapes on the UNESCO World Heritage List highlights a unique aspect of India's heritage. Discuss the architectural ingenuity and strategic vision embodied in these landscapes, and how they reflect the Maratha Empire's military prowess and adaptive strategies. (15 Marks, 250 Words)

20. The Chola Gangam Lake and the Great Living Chola Temples are profound testaments to the Imperial Chola Dynasty's architectural, engineering, and cultural achievements. Examine the multi-faceted legacy of the Cholas, particularly focusing on their contributions to water management, religious traditions, and maritime power. (15 Marks, 250 Words)

12.4. Ethics Case Study

With the rise of digital platforms, celebrities promoting illegal or harmful products have attracted increasing scrutiny. While Indian laws such as the Consumer Protection Act, 2019, ASCI guidelines, and recent directives from the Department of Consumer Affairs aim to regulate these endorsements, challenges remain due to gaps in transparency and ethical responsibility.

Against this backdrop, answer the following questions:

➲ Analyze the role of various stakeholders in promoting ethical advertising and endorsements. What are the challenges faced in enforcement?

➲ Discuss the significance of collective moral responsibility and ethics education in improving the conduct of public figures in the digital era.

➲ Propose a robust strategy involving legal reforms, accountability mechanisms, and awareness campaigns to curb unethical celebrity endorsements, especially for online betting and similar harmful products.

ANSWERS AND EXPLANATION

13.1. MCQs Answer and Explanation

1. **Answer: B**
   Explanation:
   - Voting age lowered from **21 to 18 by 61st Amendment 1988.**

2. **Answer: B**
   Explanation:
   Recommendations given in the report
   - Adequate Devolution: States to create time-bound devolution roadmap; transfer control over local staff (e.g., health workers).
     - **Ministry of Panchayati Raj (MoPR) to prepare State of Devolution Report on 3Fs progress.**

3. **Answer: C**
   Explanation:
   - **Statement 1 is correct:** Article 262 indeed gives Parliament the power to provide for adjudication of inter-state water disputes .
   - **Statement 2 is not correct:** The Supreme Court cannot directly adjudicate the original dispute; it can only interpret tribunal awards.
   - **Statement 3 is correct:** The Inter-State River Water Disputes Act, 1956 empowers the Union Government to set up tribunals.

4. **Answer: A**
   Explanation:
   - **Statement 1 is correct:** The 97th Amendment added **Article 43B** to promote cooperatives as a DPSP.
   - **Statement 2 is correct:** It also inserted **Part IXB (Articles 243ZH–243ZT)** for cooperative governance.
   - **Statement 3 is not correct:** Multi-State Cooperatives are in the **Union List,** not the State List.

5. **Answer: C**
   Explanation:
   - Located at the Great Bend of the Yarlung Tsangpo (Brahmaputra) River in Tibet.

6. **Answer: B**
   Explanation:
   - Geelong Treaty under AUKUS Pillar I deals with nuclear-powered submarines.

7. **Answer: B**
   Explanation:
   - Girmitiyas were indentured labourers who migrated post Slavery Abolition Act 1833.

8. **Answer: C**
   Explanation:
   - It connects eastern Indian ports with Myanmar and then to Mizoram.

9. **Answer: (b) 1, 2 and 4 only**
   Explanation
   - **Statement 1 – Correct**: PMDDKY is implemented by the Ministry of Agriculture and Farmers' Welfare and monitored through a **three-tier system** (national, state, district).
   - **Statement 2 – Correct:** NITI Aayog selects **100 districts** based on criteria such as low crop productivity, moderate cropping intensity, credit access, and geographic representation.
   - **Statement 3 – Incorrect:** The scheme provides **both subsidies and loans** (e.g., via Kisan Credit Card, NABARD support), not just grants.
   - **Statement 4 – Correct:** It includes **overseas training for 500 farmers** in countries like Israel, Japan, and Netherlands.

10. Answer: (b) Only two
Explanation
- **Statement 1 – Incorrect:** The nodal **ministry is the Ministry of Labour & Employment,** not MSDE.
- **Statement 2 – Correct:** First-time employees with a salary up to **₹1,00,000 per month** and registered with EPFO are eligible. They receive **up to one month's EPF wage (max ₹15,000)** in two instalments.
- **Statement 3 – Correct:** Employers in the **manufacturing sector** receive incentives for an **additional 2 years** compared to others.
- **Statement 4 – Incorrect:** Employer incentives are **monthly financial assistance (₹1,000–₹3,000 per employee per month),** not a one-time grant.

11. Answer: (c) 1, 2 and 4 only
Explanation
- **Statement 1 – Correct:** All IPR forms in India (patents, trademarks, designs, copyright, GIs, semiconductor layout, plant varieties, trade secrets) are administered by **CGPDTM under DPIIT.**
- **Statement 2 – Correct:** India adopted the **Locarno Classification,** which is the international system for classifying **industrial designs.**
- **Statement 3 – Incorrect:** Geographical Indications (GIs) are governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999, not** the Copyright Act, 1957.
- **Statement 4 – Correct:** India rose from **9th in 2020** to **6th in 2023** in global patent filings.

12. Answer: (b) 1 and 3 only
Explanation:
- Project 17A is indeed the follow-on of Project 17 (Shivalik class) frigates (Statement 1 correct).
- The frigates are multi-role vessels, not just anti-submarine (Statement 2 wrong).
- They have enhanced stealth features and advanced weapons/sensors (Statement 3 correct).

13. Answer: (b) Only two
Explanation:
- ERASR is a totally indigenous anti-submarine rocket launched from ships (Statement 1 correct).
- It uses a twin-rocket motor configuration and Electronic Time Fuze (Statement 2 correct).
- It is designed to target submarines, not supersonic aircraft (Statement 3 wrong).

14. Answer: (d) 1, 2 and 3
Explanation:
- Astra is indeed India's first indigenous BVRAAM

(Statement 1 correct).
- It has a range of over 100 km (Statement 2 correct).
- It can engage supersonic, highly manoeuvring aircraft in all weather, day & night (Statement 3 correct).

15. Answer: (a)
Explanation:
- **Statement 1 is correct:** India's urban population is projected to nearly double from 480 million in 2020 to 951 million by 2050, and further increase to 1.1 billion by 2070. Over 70% of new jobs in India are expected to be generated in cities by 2030.
- **Statement 2 is correct:** Pluvial (storm water) flooding risk is rapidly increasing, with annual losses from pluvial flooding estimated at $4 billion currently, projected to increase to $5 billion by 2030.
- **Statement 3 is incorrect:** The private sector contributes only 5% of urban infrastructure financing in India, despite having project planning and efficiency capabilities.

16. Answer: (b)
Explanation:
- **Statement 1 is correct:** Union Minister for Petroleum and Natural Gas announced India's achievement of 20% Ethanol blending target in petrol by 2025.
- **Statement 2 is correct:** The National Policy on Biofuels (2018), as amended in 2022, advanced the target of 20% blending of ethanol in petrol to 2025-26 from 2030.
- **Statement 3 is incorrect:** 1st Generation Ethanol is made from food crops such as cereals, sugarcane, sugar beet, etc. 2nd Generation Ethanol is made from ligno-cellulosic or woody biomass, or agricultural residues.

17. Answer: (b)
Explanation:
- **Statement 1 is incorrect:** NEP 2020 is the country's third education policy post-independence (the first two were in 1968 and 1986, modified in 1992).
- **Statement 2 is correct:** Multilingualism is a key focus, with the medium of instruction recommended until at least Grade 5 (preferably Grade 8 and beyond) in local languages.
- **Statement 3 is correct:** The Academic Bank of Credit (ABC) is a key feature in Higher Education, designed to digitally store academic credits earned from various recognized Higher Education Institutions.

18. **Answer: (d)**
    Explanation:
    - **Statement 1 is correct:** Two black holes, one of them 140 times more massive than the Sun, and the other 100 times bigger, merged to result a black hole estimated to be about 225 times the size of the Sun.
    - **Statement 2 is correct:** The detection of the gravitational waves from this event was made by the LVK network of observatories, involving the LIGO detector in the United States, Virgo in Italy and KAGRA in Japan.
    - **Statement 3 is correct:** This merger surpasses all previous detections in mass, resetting our understanding of black hole extremes. In addition to being extremely massive, they were also spinning incredibly fast, making this a uniquely challenging signal to interpret and suggesting the possibility of a complex formation history.

19. **Answer: (b) 2 and 3 only**
    Explanation:
    - **Statement 1 is incorrect:** The Maratha Military Landscapes are geographically spread across both Maharashtra and Tamil Nadu.

    - **Statement 2 is correct:** The Gingee Hill Fort, located in Tamil Nadu, is explicitly listed as one of the twelve forts within the Maratha Military Landscapes.
    - **Statement 3 is correct:** Raigad Hill Fort was selected by Chhatrapati Shivaji as his permanent capital, and it is indeed part of the Maratha Military Landscapes.

20. **Correct Answer: (c) 1 and 3 only**
    Explanation:
    - **Statement 1 is correct:** The Piprahwa Relics were discovered in **Piprahwa, Siddharthnagar, Uttar Pradesh,** and are significant as they are associated with the **mortal remains (Body relics) of Buddha.**
    - **Statement 2 is incorrect:** A Brahmi script inscription on one of the caskets confirms them as Buddha relics, but they were deposited by the **Sakya clan,** not the Maurya clan.
    - **Statement 3 is correct:** The Piprahwa Relics are classified as 'AA' antiquities under Indian law, which means their removal or sale is prohibited.

13.2. True/False Answers

Answers

1. T	2. F	3. T	4. T	5. T	6. F	7. T	8. T	9. T	10. T
11. F	12. F	13. T	14. F	15. F	16. T	17. F	18. T	19. T	20. F

13.3. Approach to the Mains Practice Questions

1. **Approach:**
   - **Introduction:** Define Digital Colonialism, Explain pillars (economic, surveillance, cultural)
   - Body: Highlight issues (privacy, local business, regulation gaps), Mention Indian measures (DPDP Act 2023, ONDC, India Stack, global advocacy).
   - Conclusion: Suggest way forward: data localization, digital sovereignty, governance framework

2. **Approach:**
   - **Introduction:** Mention global trends (Germany, Austria, Argentina) then mention India's experience (61st Amendment, proposal for 17 years).
   - **Body:** Mention Arguments in favor and Arguments against.

   - **Conclusion:** Suggest a Way forward like civic education, voter awareness, gradual reforms.

3. **Approach:**
   - **Introduction:** Context of CETA & Vision 2035.
   - **Body:** Mention provisions like Tariff elimination, service sector benefits. Then mention challenges associated with it.
   - **Conclusion:** Mention balancing opportunities with strategic concerns.

4. **Approach:**
   - **Intro:** Start with Det ails of the project.
   - **Body:** Mention issues with the project like Water weaponization, agriculture disruption, seismic risks. Then explain what is India's response.

- **Conclusion:** Conclude with need for transboundary water governance.

5. **Approach:**
   - **Introduction:** Begin by defining public debt as the total borrowing of the government (internal + external) and explain its importance in financing development. Mention RBI's Financial Stability Report 2025.
   - **Main Body: Discuss Reasons for rising public debt, Impact and Government framework & efforts.**
   - **Conclusion:** Conclude with steps to be taken.

6. **Approach**
   - **Introduction:** Briefly mention RDI Scheme and its aim to catalyze private sector R&D in sunrise and deep-tech areas.
   - **Main Body:** Discuss **Significance of the RDI Scheme, Challenges in R&D in India, Government initiatives.**
   - **Conclusion:** Conclude with way forward to increase R&D.

7. **Approach:**
   - **Introduction:** Briefly acknowledge India's rapid urbanization and its projection.
   - **Body:** Mention key vulnerabilities, challenges in building resilience and evaluation of recommendations
   - **Conclusion:** Implementation of multi-faceted recommendations.

8. **Approach:**
   - **Introduction:** Phenome India National Biobank details.
   - **Body:** Mention its objectives and significance. And how this initiative leveraging data for disease combat.
   - **Conclusion:** Biobank's critical role in transforming healthcare and research in India.

9. **Approach**
   - **Introduction:** Start with recent SC judgment. Body: Discuss the factors behind this mental health crisis
   - **Conclusion:** Conclude with steps taken by the government.

10. **Approach**
    - **Introduction:** Start with recent context of the technology.
    - **Body:** Explain Bluetooth Mesh Networking and its potential significance

- **Conclusion:** Conclude accordingly.

11. **Approach:**
    - **Introduction:** Importance of finance for PRIs (health, education, SDGs, women empowerment)
    - **Body:** Mention issues declining funds, tied grants, weak SFCs, poor OSR. Mention Initiatives taken in India.
    - **Conclusion:** Can end with Committee recommendations as a way forward, regular SFCs, timely elections, devolution roadmap.

12. **Approach:**
    - **Introduction:** Mention examples (Cauvery, Ravi-Beas, Mahanadi) with legal framework related.
    - **Body:** Mention related Challenges like tribunal delays, politicization, lack of data, then reforms required.
    - **Conclusion:** Can mention holistic basin-based management with stakeholder participation.

13. **Approach:**
    - **Introduction:** India–Africa's historical connection (anti-colonial solidarity, Non-Aligned Movement, South-South cooperation).
    - **Body:** Challenges in India–Africa relations and Measures to strengthen partnership
    - **Conclusion:** India–Africa ties are built on trust and shared developmental goals

14. **Approach**
    - **Introduction:** Briefly mention recent layoffs (e.g., TCS, global layoffs) as a trigger, then briefly define the future of work.
    - **Main Body:** Discuss **Key drivers, Impacts** and **Government initiatives.**
    - **Conclusion:** Highlight significance of reskilling, social security, and technology adoption to ensure inclusive, equitable, and resilient work futures.

15. **Approach:**
    - **Introduction:** Define in brief about Quantum computing and Quantum Cyber Readiness.
    - **Main Body:** Discuss the Quantum cyber threats and Initiatives taken by the government for Cybersecurity.
    - **Conclusion:** Briefly highlight about the significance of Cyber security and way forward.

16. **Approach:**
    - **Introduction:** Begin by stating India's recent achievement and its significance.
    - **Body:** Mention key challenges and initiatives undertaken.

- **Conclusion:** Addressing multi-faceted challenges (balancing food, water, and energy needs) crucial for the sustainable success of the ethanol blending program.

17. **Approach:**
- **Introduction:** Briefly introduce NEP 2020 as India's third education policy, highlighting its foundational principles like conceptual understanding, technology integration, and equity.
- **Body:** Mention achievements and significant hurdles in implementation.
- **Conclusion:** Summarize NEP 2020 has achieved commendable progress but needs to address issues of funding, governance, stakeholder coordination, and infrastructural capacity.

18. **Approach:**
- **Introduction:** NISAR mission key details.
- **Body:** Mention key technological features and significance and applications.
- **Conclusion:** NISAR's importance as a **powerful tool for sustainable development, disaster preparedness, and climate resilience,** marking a significant leap in India's Earth observation capability.

19. **Approach:**
- **Introduction:** recent inclusion of the Maratha Military Landscapes as the **44th site from India** on the UNESCO World Heritage List.
- **Body:** Give details on architectural ingenuity and strategic vision. Also on reflection of military prowess and adaptive strategies.
- **Conclusion:** Conclude by summarizing that these landscapes are enduring symbols of the Chhatrapati Shivaji's vision, Maratha engineering brilliance, and their formidable military and administrative foresight, reflecting a unique phase in Indian history.
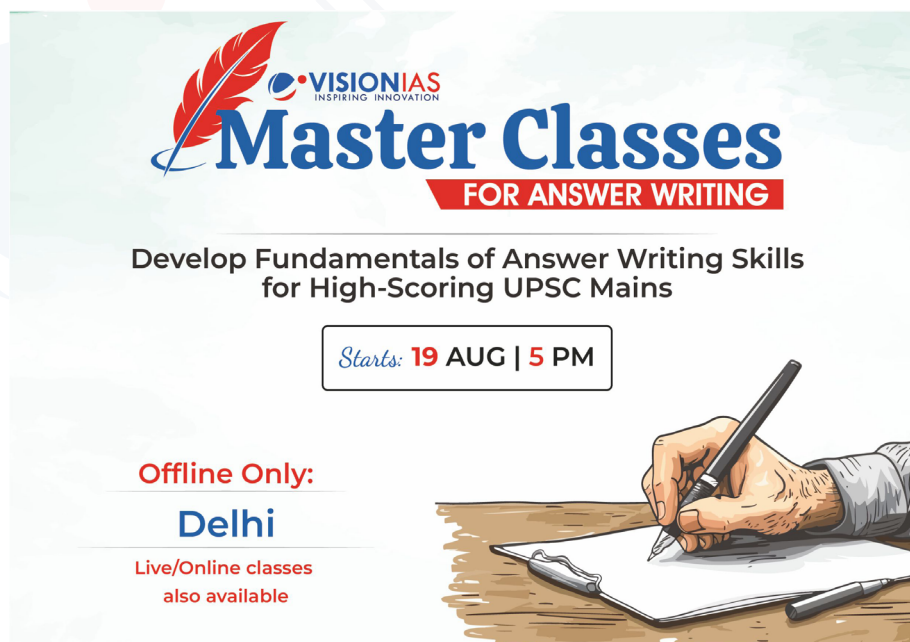
20. **Approach:**
- **Introduction:** Introduce the Imperial Chola Dynasty.
- **Body:** Mention chola dynasty's contributions to water management, promotion of religious traditions and development of maritime power.
- **Conclusion:** Conclude by affirming that the Chola legacy.

13.4. Approach to Case Studies

Introduction: Present the case as ethical dilemma balancing the advertisements and key ethical dilemma.
- ➲ **Discus various stakeholders involved. Also discuss the challenges faced by the various stakeholders in the enforcement.**
- ➲ **Discuss how** collective moral responsibility and ethics education improve the conduct of public figures in this digital era.
- ➲ **Propose a strategy involving the following: Self-regulation, Regulation, Corporate Social Responsibility, Public Awareness, Collective Ethical Duty.**

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14. Self-Evaluation

Progress Tracking Table

Activity Type	Total Questions	Correct Answers	Attempted	Score/Percentage
MCQ's				
True/False Statements				

Monthly Learning Summary

Top 3 Learnings/Insights

1.

2.

3.

Progress Comparison

Previous Month's Score
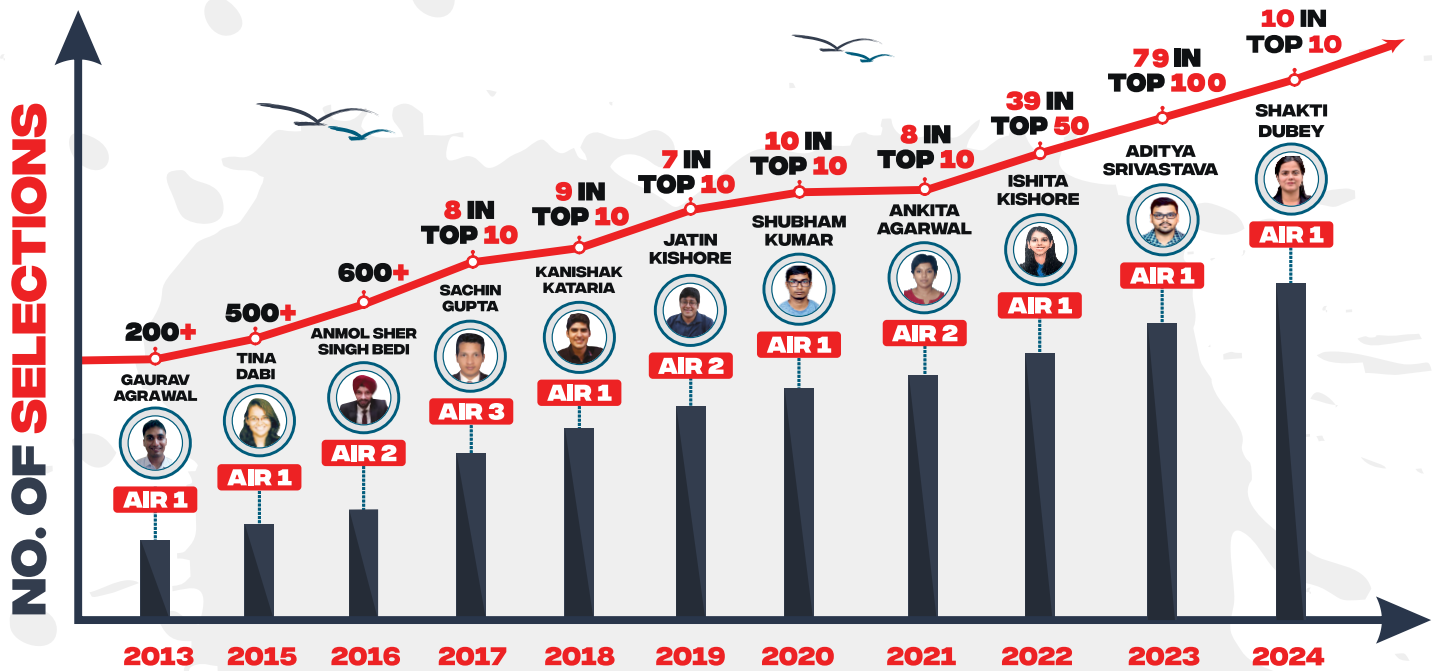
Current Month's Score

Areas of Improvement

Reflection Section

Strengths

Areas for Improvement

Goals for Next Month

VISIONIAS
INSPIRING INNOVATION

OUR ACHIEVEMENTS

NO. OF SELECTIONS

- **200+** — GAURAV AGRAWAL — AIR 1 — 2013
- **500+** — TINA DABI — AIR 1 — 2015
- **600+** — ANMOL SHER SINGH BEDI — AIR 2 — 2016
- **8 IN TOP 10** — SACHIN GUPTA — AIR 3 — 2017
- **9 IN TOP 10** — KANISHAK KATARIA — AIR 1 — 2018
- **7 IN TOP 10** — JATIN KISHORE — AIR 2 — 2019
- **10 IN TOP 10** — SHUBHAM KUMAR — AIR 1 — 2020
- **8 IN TOP 10** — ANKITA AGARWAL — AIR 2 — 2021
- **39 IN TOP 50** — ISHITA KISHORE — AIR 1 — 2022
- **79 IN TOP 100** — ADITYA SRIVASTAVA — AIR 1 — 2023
- **10 IN TOP 10** — SHAKTI DUBEY — AIR 1 — 2024

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| HYDERABAD: 3 SEP | JAIPUR: 5 & 10 AUG | JODHPUR: 10 AUG | LUCKNOW: 29 AUG | PUNE: 14 JULY |

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